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BALTIMORE, APRIL 18, 1901.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week. For the first issue in the month we should receive copy by Friday Morning of the week preceding.

Mr. Whaley's Triumph.

At the invitation of Mr. W. B. Smith Whaley a party of mill men and engineers of New England, with representatives of the General Electric Co., visited Columbia, S. C., last week to inspect the Olympia Cotton Mill, built by Mr. Whaley, and not only the largest cotton mill in the South and one of the largest cotton mills in the world, but the first one built in the United States for the employment of electricity generated by steam. The party were entertained at Columbia by Mr. Whaley, where they met Governor McSweeney and representative citizens of Charleston, Columbia and other towns of the State. The visit was made the occasion for special tributes to the work of Mr. Whaley as an industrial leader, not only by the visitors, but by The State, published at the scene of Mr. Whaley's successes, and the News and Courier of Charleston, which takes just pride in the fact that Mr. Whaley was born there.

The latter paper finds that South Carolina is making progress when the mill-builders of New England acknowledge that Mr. Whaley has set a new mark in mill-building, and suggests that it would be a proper tribute to his ability and skill if New England mill-owners should invite him to construct a mill in New England after the Olympia pattern. To him and to those persons who stuck by him in his efforts to win success the News and Courier attributes the revivification of Columbia. It points out that the \$1200 a month paid in wages twelve years ago by one manufacturing concern in the town have grown to more than \$60,000 a month; that houses are growing up all over the place, with prices of real estate more than doubled in the last five years; that new and modern hotels have been opened, streets paved and a system of electric street cars put in operation, railroads keeping pace with actual requirements of business, and the population increasing at a most en-

couraging rate. All of this is gratifying to Mr. Whaley and his friends, and is encouraging to others to go and do likewise.

Facts That Are Effective.

Col. J. B. Killebrew, industrial and immigration agent of the Nashville, Chattanooga & St. Louis Railway Co., has done an excellent work for Tennessee, Kentucky, Alabama and Georgia, through which the road runs, by issuing a pamphlet descriptive of the opportunities for farming, grazing and poultry-raising in the territory tributary to the road. The pamphlet is unique in many respects. Crops that are extensively grown in the North are mentioned briefly, while those rarely grown in the North are elaborately treated. The author does not confine himself to an announcement of the twenty-eight crops ranging from corn to cotton and from peanuts to sweet potatoes, but in lucid style gives directions for their cultivation based upon actual experience. In dealing with live-stock he describes the kinds which have been successfully raised and directs attention to the lands particularly available. He has something to say also about the labor supply and about the towns and cities along the line of his railway. Other pamphlets issued by Colonel Killebrew are devoted specially to tobacco culture, water-powers and eligible sites for manufacturing industries, timber resources, mineral deposits and mining interests, all of which will be found valuable for the homeseeker or the large investor.

A Word of Caution to Texas.

Probably some great and stirring event such as the oil development at Beaumont was needed to awaken Texas to its vast possibilities, as well as to attract the world's attention to that imperial region. Under the stimulus given by the phenomenal oil activity all Texas has jumped into activity, and henceforth there will be far greater progress than has ever before been made in that section. But there is danger ahead, especially in the oil excitement. Indications seem to promise that the greatest oil-producing center in the world has been found, and if further developments are as favorable as those already made it will be difficult to set a limit to the effect upon the progress and prosperity of the whole Texas oil territory, and even upon the State itself. But the very magnitude of the output is staggering. To build tanks and pipe lines and create a market for such a vast quantity of fuel oil will test the capital and brains of the men who are at work in that field. Eventually it will be done; but in the meantime, should production run ahead of consumption, prices will be forced down. This will affect the speculative excitement in stocks, and we may see a depression corresponding to the present boom. Many men are buying, hop-

ing to sell at an advance to someone else. For men who can afford to lose what they risk this may be all right, but hundreds of clerks and others will be drawn into this wild speculation. In this is the danger, for a collapse must always follow a wild speculative boom, no matter how sound may be the inherent strength of the position. The people of Texas may therefore well afford to move with caution. They have found a bonanza of almost infinite value, but conservatism is wise just now.

Still Dreaming.

Commenting upon a statement made recently in the Manufacturers' Record by Mr. W. B. Smith Whaley of Columbia, S. C., that "the day will come when the South of all sections of our country will be the stoutest protectionist and the most urgent for the subsidizing of American ships, because each year its manufactures are increasing," the Houston Post indulges in the following:

This is a straight assumption that the honest convictions of the masses of the South will be reversed, like a coat, because the interests of one or two classes might be subserved by a protectionist and subsidy or bounty policy. This is not only a reflection upon the integrity of opinion, but an insult to the intelligence of the South. The Post has a higher estimate of the honesty and stability of Southern opinion and sentiment than that.

It is apparent from this that the Houston Post either has not read carefully the whole article in which Mr. Whaley's words were quoted, that it has not been keeping a close watch upon developments of public sentiment in the South in recent years, or that it is incapable of crediting with honesty a person whose opinion is different from its, and who has the courage to change his mind when he believes his section will be benefited. The Houston Post's contention is well answered as follows by the Charleston Post:

Where is the cause for heroics? What has the question to do with sentiment and integrity? Since when did the tariff become a moral principle? It is certainly clear and proper that if the policy of protection serves a people's industrial interests they are going to adopt it, though they may have formerly advocated free trade, because it suited better their business.

There would be no stultification nor departure from principle if the South should, because of its altered commercial interests, become a protectionist section. For, consider a moment why the South has favored free trade. Was it from pure sentiment, or because of an overspring of milk of human kindness? Not by any means, but merely because, being an agricultural section, exporting its products, and buying manufactured goods without its bounds, it wanted the widest market for its purchases. A simple commercial conclusion. And now, if these conditions are changed, is it necessary that we should hold to a policy conceived for purely selfish ends to fit occasions that are passed? Why should not we, as well as our fathers, make policies of purely selfish interest?

The Manufacturers' Record takes the liberty to amend these words in suggesting that there has never been a time in the history of the country when

an agitation for free trade has received the undivided support of the South; that the history of the world has many records of a shifting of economic sentiment by sensible men in response to changing economic conditions, and that while ambitious politicians and their allies have sought to give to their platforms the character of principles, the mass of men who think for themselves have suffered no degradation in refusing to accept such dogma.

Preaching Home Factories.

The Chattanooga Chamber of Commerce has published under the auspices of its home-industry league a convenient pocket pamphlet containing an alphabetical list of the articles made by the various manufacturing plants of that city. The publication is an outcome of a movement for the encouragement of home industries which is becoming stronger and stronger throughout the South. The local newspapers in many cities and towns have contributed to the good work, and are still at it. For example, several furniture plants in Mississippi are enjoying a substantial business, but the Biloxi Herald is not satisfied. It believes that there is no reason why there should not be hundreds of such factories in profitable operation in the State. It says:

We have not only all the raw materials in abundance within our own boundaries, but have many advantages in a manufacturing way that are not enjoyed by the factories in the Northwest and Eastern States. Thousands upon thousands of feet of dimension timber of various kinds are annually shipped from Mississippi to these foreign factories, where it is converted into furniture, and then returned here in its various manufactured forms and sold to us at 100 or more per cent. profit. If it pays large profits to these institutions to purchase their raw material here, paying high freight charges, and working it up into finished products, it would certainly be more profitable to home manufacturers who have the materials at their own doors awaiting utilization.

The papers are convinced that something more than talk, passing resolutions or wishing is necessary to develop a community. They are strong for doing. Thus, the Fayette Journal of Fayetteville, W. Va., says:

Folded hands accomplish nothing. The blood halts and staggers as it passes through them. They should be in use. Nature demands it of them. If they but knit, they make socks. If they want to, they can build railroads.

The Standard of Cedartown, Ga., is an illustration of the rising spirit, and says:

But natural conditions and favorable surroundings and great resources alone never built any city. These are all right as aids, but without public spirit, pluck and energy nothing could or would ever be done.

And the Spartanburg Truth of South Carolina, referring to the influx of capital to a town, says:

Any effort to start an enterprise which means employment to others and the placing of more taxable property upon the tax books is always encouraged in all live towns.

These are the sentiments which are given wide circulation from the Potomac to the Rio Grande. In some cases

public acts are not in accord with their spirit. That should be an additional incentive to more strenuous preaching of them.

INSPECTED BY THE STANDARD.

Magnitude of Handling the Beaumont Oil Yield Realized.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, April 13.

The excitement in the Beaumont oil fields during the past week has been no whit less intense than during the previous week. This week has seen more oil companies formed than any week since the gusher came in. Yesterday there were sixteen oil companies authorized to do business in Texas. Not only is the fever burning at Beaumont, but, like the roots of some plant seeking new fields, it has ramified into every portion of the State. Charters are being granted different parties in every section of Southern and Eastern Texas for the purpose of leasing land and boring for oil. Needless to say, a great many of these schemes are the purest "wildcatting," and whoever invests in them will undoubtedly lose their money. Manifestly, with so many companies, some good and some bad, being organized every day, it is out of the question to list them all. Therefore the more prominent ones will only be mentioned in these columns until something of interest to the public happens to the others. No new wells have come in during the week, although next week, it is thought, there will be known the results of the boring on two or three tracts close in to the Lucas geyser. The Stribling well has been expected in for some days, but through a variety of accidents work has been seriously impeded. This well is now down about 1000 feet, and Major Stribling reports today that he is boring through dirt running 85 per cent. sulphur. Much interest is manifested in this well, because it is considerably distant, comparatively speaking, from the gusher.

The feature of the week was the visit of the Standard Oil party, consisting of C. N. Payne, field manager; Mr. O'Day, vice-president, and Mr. Lufkin, auditor, together with Mr. Oliphant, whose official position is not known. They expressed great surprise at the magnificent field here, but would not commit themselves in any way as to the Standard's views with respect to the field. They took occasion to state that had it not been for inimical Texas anti-trust laws they would have been in the field fifteen minutes after the Lucas gusher spouted. The primary object in inviting them to come here was to suggest ways and means for handling the product to the best advantage of all concerned, but the gentlemen seemed somewhat short of ideas in regard to this problem. They stated before leaving that the matter would be given attention at once by the Standard's board of directors. As a matter of fact, the problem of handling this Beaumont oil is one that is fully able to worry the biggest oil operators in the business. It is a stupendous problem, and the proposition is of such colossal magnitude as to well-nigh stagger one when one stops to carefully figure on the problem. Not one in twenty of the many who are organizing oil companies stops to consider the ultimate outcome of the project, and few of them care, as the main object with this class of concern seems to be to get the stock on the market and obtain money therefor. There are many good companies which are organized on a business basis and which have good prospects behind them, but there are also many of the other kind.

The largest oil company yet formed, and

which on its face at least seems to be a sound business proposition, is what is known as the Natural Oil & Pipe Line Co. This concern is a merging of several outside capitalists with the stockholders of the Texas-Western Oil Co., who were fortunate enough to bring in the second gusher. The Texas-Western Oil Co. sold its well, together with its leases, etc., to the National Oil & Pipe Line Co. for \$1,250,000. The latter concern is capitalized at \$5,000,000. The men behind this are possessed of ample means for the carrying through of their project, and are fully able to handle the stock of the company themselves. The president is Robert L. Henry, late of the Champion Iron & Steel Co. of Muskegon, Mich.; G. C. Mansfield, vice-president, banker of Wisconsin; W. S. Davidson, banker of Beaumont, second vice-president; Allison Templeton, treasurer, banker of Corsicana. The secretary has not yet been decided upon. H. G. Talbot will be assistant secretary. There are other well-known men connected with the company. It is the purpose of the National Oil & Pipe Line Co. to immediately begin preparations for handling the output of its great well, and construction of tankage and pipe lines to the Gulf are promised as soon as they can be built, and it is reported that a steamer and a barge line will be put in operation to New Orleans and Galveston.

On Wednesday last an excursion was run to Beaumont from surrounding cities, such as Houston and Galveston, and fully 3000 people were brought here. The occasion of this was the promise of the Higgins Oil Co. to turn its well loose for five minutes, which it did. There was a strong wind blowing, and the oil did not go as high as the Lucas. It reached up to top of the 64-foot derrick, and would probably have gone twenty to thirty feet higher had not the wind sprayed it. The well is not of as great capacity as the Lucas. The Texas-Western Company at the time was busily engaged in getting out its four-inch piping on the inside of its well, and the excursionists were fortunate, for while there were 10,000 people on the prairie looking at the Higgins well the Texas-Western well came in with a roar and blew out seventy feet of four-inch piping. It would rival the Lucas if it were allowed to flow an equal length of time.

The Kentucky Oil Fields.

[Special Cor. Manufacturers' Record.]
Somerset, Ky., April 15.

The oil development southwest of this place in Wayne county, Kentucky, and Fentress county, Tennessee, is proceeding rapidly. W. G. Strubbe and associates have contracted for several oil wells. The Somerset Oil Co. has contracted for two more oil wells, and the Carpenter's Fork Oil & Gas Co. will make contracts within a few days for several wells to be drilled on its property. A large number of West Virginia, Pennsylvania and Eastern oil men are flocking to the Tennessee and Kentucky fields, and a great deal of development will take place within the next few weeks. Somerset is the headquarters for the oil development, as the pipe line terminates at this place and the Standard Oil Co. has under contemplation the building of an oil refinery here.

Articles of incorporation of the Carpenter's Fork Oil & Gas Co. were filed in the county clerk's office at this place last Monday. Capital stock is \$25,000. J. P. Hornaday is the chief incorporator of the company, owns a large amount of oil and gas territory in the Kentucky and Tennessee field, and will develop its property at once.

VALUABLE OPPORTUNITIES IN SOUTHERN COPPER.

By C. F. Z. Caracristi, C. E. E. M.

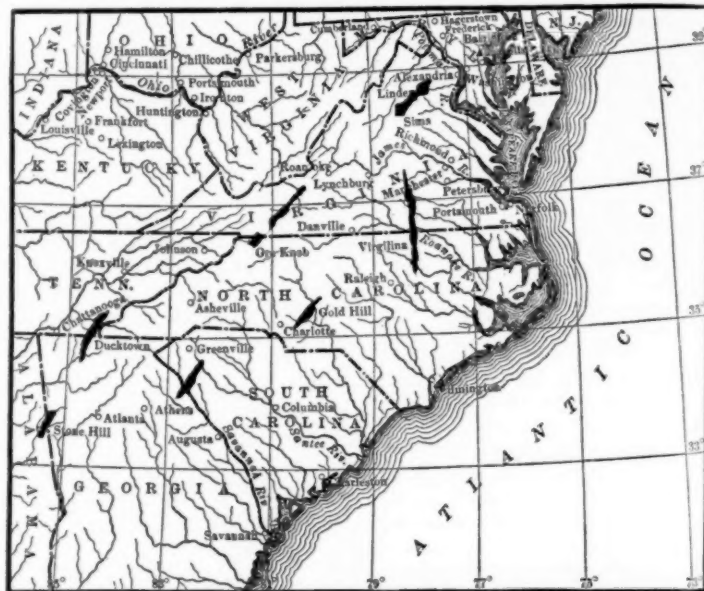
[Written for the Manufacturers' Record.]

In writing this series of papers on the various mineral resources for the Manufacturers' Record I desire it to be understood that I do so not with the object of recommending any particular mine or property, but rather with the object of disseminating general information for investors and the public as to profitable fields. It is not every hole in the ground near a celebrated mine that of itself constitutes either a mine or a favorable prospect, nor do rich, narrow streaks of ore traversing a section of country establish a logical reason for the creation of excitement and the sale of properties. The "mining fever" is as contagious as the most pernicious disease, and the proposed investor cannot consult too able experts before disbursing his money. The stereotyped phrases of mine vendors are: "Supply inexhaustible," "greatest mine in the world," and "the mine adjoins the celebrated got-rich mine, and so-and-so, great mining expert, says it is on the same vein." Every rich mining section has on the market hundreds of worthless properties that go to destroy or,

could not command capital to cover preliminary expenses.

As disastrous as this condition has been to the real-estate speculator, who hoped to realize vast sums from the disposal of properties held under cheap options, it has made it possible for the legitimate miner and conservative investor to purchase and develop copper properties in the South with a reasonable outlay of money and without a brass-band accompaniment. The high importance of this condition lies in the fact that the judicious miner and the investor find themselves possessed of copper properties located in valuable territory that will return equitable and lasting dividends. It is clear that the distrust with which Southern copper has been unjustly viewed by Northern and Western capitalists has automatically organized a sanitary condition by preventing the flotation of worthless companies that of their own gravity would have failed and carried with them the welfare of the industry.

As I look over the Southern copper sit-



LOCATIONS OF SOUTHERN COPPER CROPPINGS.
Sketched by C. F. Z. Caracristi.

at least, retard the sale and development of meritorious propositions. This is true of all localities, and remarkably so in copper properties, where a few ounces of carbonate (malachite) will tint tons of rock.

Owing to considerable activity in stock jobbery and the sale of worthless copper stocks by means of promised dividends, circus-advertising methods and the payment of exorbitant commissions to stock peddlers, the country, especially the larger cities and the New England States, has been burdened with prospectuses reporting great copper finds, upon which reports sales of stock have been made. Such an unhealthy condition, fostered by a large demand for metallic copper in mechanics and the arts, the prosperity of the country and the consequent willingness of the public to invest in securities, has unquestionably done much to injure many of the new fields of the West. It is a source of great gratification, however, to be able to state that the Southern States have contributed an insignificant proportion of these worthless companies. This is due to a large extent to the fact that so deep-rooted has been the prejudice against Southern copper that the small-company promoter, who is generally dependent upon outside assistance in order to develop his properties and float his company,

uation of the present and contrast it with its position in 1889, when I examined the New River (Va.) and North Carolina iron and copper deposits for Capt. Philip Chapin (Mr. Andrew Carnegie's Homestead manager), I cannot fail to be surprised at my own change of view as to the possibility of the South as a profitable copper producer. So marked has been this change that when, in 1898, I was retained by Mr. M. H. Horton, member New York Produce Exchange, etc., to report on this same region, I found it my duty to report favorably, with the result that the North Carolina Copper Co. was organized and many valuable properties in the New River district purchased. While everyone knows that the geological conditions could not have changed, we must attribute the present value of the Southern copper deposits to a radical change in the metallurgical treatment of ores, the establishment of smelters near mining camps, the construction of new railroads, giving an outlet to the ore and a reduction of freight rates, the systematic and scientific management of the properties, and also the fact that until lately deep mining was rarely practiced, although the present workings cannot be called deep in a comparative sense.

Taking the Southern copper mines and

mining collectively, it may be concluded that the returns upon the total investment is equal to that of any section of the world, except where phenomenal exceptions are brought into comparison. As in all business propositions, there have been failures in the Southern copper fields and there are others impending, but these are mostly due to the purchase of properties at prices entirely out of proportion to their value, to bad judgment in locating, overcapitalization of companies, bad management and trouble among stockholders.

production was placed at 585,342,124 pounds, valued at \$104,190,898. This is due to the fact that the Survey obtains its figures by circularizing the mine owners, and that many non-producing mines make returns of imaginary production, etc., while the Engineering and Mining Journal bases its statistics on actual sales and available balances of purchasable metal, for which reason I believe the latter are probably reliable, and I assume them as such.

I estimate that to produce this amount

per cent., the total gain in foreign countries is not over 2.25 per cent. This condition fully accounts for the strength of the copper market, which closed in December, 1899, at 16.58 cents per pound, and is now at 17 cents.

The following figures show the copper production of the world as compared with the United States:*

	Tons.
Africa.....	3,106
Asia.....	33,660
Australasia.....	20,767
Canada, Newfoundland and Mexico.....	38,513
Europe.....	103,905
South America.....	38,294
United States.....	307,943

Total tons 1900..... 546,188

*Foreign mining reports.

It will be seen that the United States produced over 56 per cent. of all the copper produced in the world during 1900. So great has grown this industry that the copper exported for the same period amounted to 354,144,301 pounds, or a little over 58 per cent. of the total copper won and smelted, valued f. o. b. at \$60,000,000.

The production of copper in the Southern States for 1899 and 1900 was:*

	1899, lbs.	1900, lbs.
Ducktown, Tenn.....	3,004,681	3,461,048
Persimmon and Grayville counties, North Carolina.....	686,281	836,281
Halifax county, Virginia.....	12,000	none.

Total..... 3,702,962 4,297,329

*Railroad and smelter returns, etc.

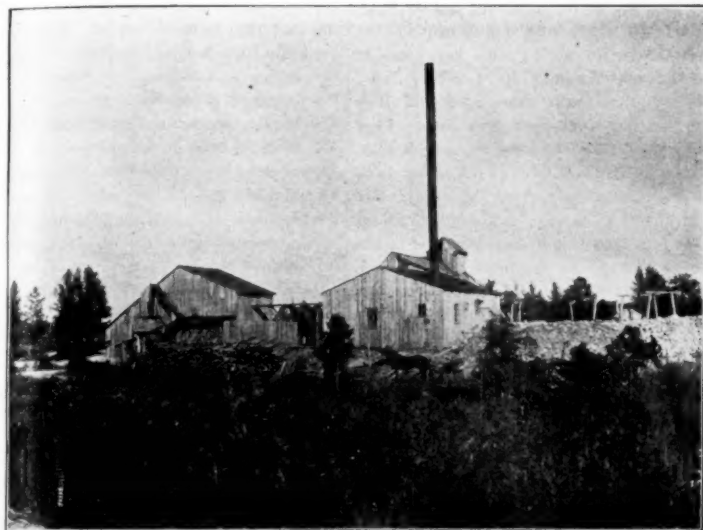
Besides the above, small quantities of ore were shipped from various sections of the South merely as test shipments, and, as in Louisa county, Virginia, in the form of by-products, but no thoroughly organized efforts have been made, although nearly all of the Southern States, and especially the New River district of North Carolina, are in a state of preparation for early shipments. I shall not treat the New River district in this review, but leave it for a separate paper covering the minerals of Grayson county, Virginia, and Alleghany and Ashe counties, North Carolina, as, from repeated investigation of the region, I consider it the most valuable iron and copper belt in the Southern States in proportion to acreage covered.

The figures I have given relative to

of the Ducktown district has a width of from two to two and five-tenths miles and a proved length of some five miles, and lies in the valley and vicinity of the Oconee river. The rocks of the country are generally hornblende, gneisses, micaceous schists and altered slates and conglomerates, and the geological features of the region are such as to justify the expression of a most favorable opinion regarding the future stability and economic value of the field. Cojointly with these phenomenal physical advantages are found substantial financial backing and scientific management that, collectively, insure the Southern copper industry a permanent character.

The Ducktown Copper, Sulphur & Iron Co., Limited, of England operates the Mary mine, and during 1899 declared a dividend of \$140,000 and a similar amount in 1900. This company's properties are well equipped both for the purpose of mining and smelting, and from 280 to 300 tons of roasted ore are treated daily, producing from 3,000,000 to 3,500,000 pounds of metallic copper per year. Developments have been in progress along the vein to further determine its workability, and it is reported from London that the output is to be augmented. As all companies operating mines in foreign countries and away from the personal influence of the board of directors do so under difficulties and at greater cost than if the properties were within easy reach, and as English corporations pay their chairman and directors fixed salaries and have many expense accounts that are not customary in like corporations in the United States, the results produced by this company, as gratifying as they seem at first glance, are not a fair measure of the value of this belt. The cost of production and transportation to New York of Ducktown copper should not be over ten cents per pound, including incidentals, etc., giving this company a net profit of from \$210,000 to \$245,000 per annum.

Beside the Ducktown Company there is found in this district the Tennessee Copper Co., with a capital of \$5,000,000



BLUE WING MINE, VIRGINIA BELT.

A safe maxim in the mining business is that the value of the mine depends on the mine itself, labor and transportation conditions, the management and capitalization. If these are not all of equal value as compared to the selling price of the output, failure is inevitable. A \$10,000 mine cannot pay dividends on \$1,000,000, nor can a man whose business it is to dig potatoes mine ore. An engineer or manager accustomed to operating a \$1,000,000 mine would be too extravagant in a \$100,000 mine, and one accustomed to a \$100,000 mine given charge of a \$1,000,000 mine would be too conservative to meet with success. Often the man makes the mine, as was the case with the Holloway, in the Virgilina field, which has been abandoned three times and pronounced worthless. Today, however, owing to the ability and perseverance of Mr. John Battershill, it is one of the best paying mines in the country for the amount of capital invested.

Unless the Lake Superior region increases its copper output very materially, which, from the present outlook, is not probable, the stability of the copper market, for the next decade at least, is assured, because of the great demand for the metal in electrical and other branches of the mechanical arts.

The apparent activity in copper during the past three years has been more a printer's-ink and stock-certificate movement than an actually large increase in the production of the metal itself. Although it is safe to estimate the increase in capital invested in the copper business throughout the United States during this period at 20 per cent., yet the actual increase in production during the year 1900 over the previous year was only 5.9 per cent., or—

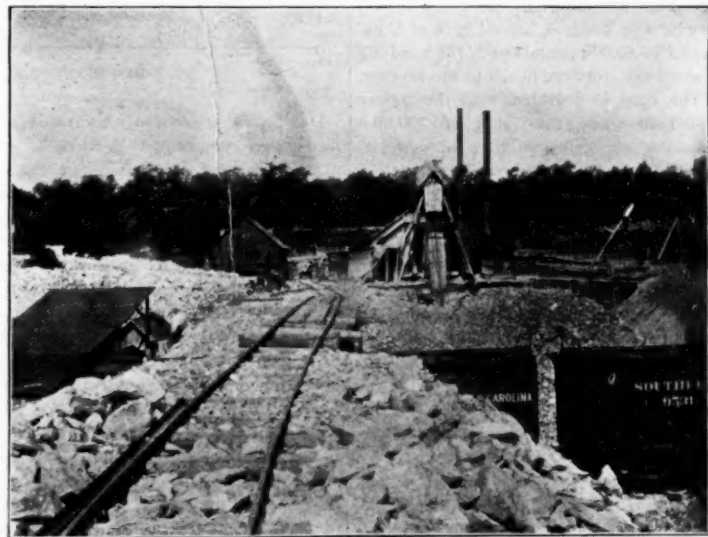
	Pounds.
Metallic copper and by-products 1899.....	581,319,091
Metallic copper and by-products 1900.....	615,887,360
Total increase 1900.....	34,568,269

The value of the metal was \$98,541,977.60. It is probable that the returns of the United States Geological Survey for the same period will be much higher, as was the case in 1899, when the copper

of copper and work done on non-productive mines, etc., for 1900 about 25,000,000 tons of material were brought to the surface and handled, having an average value of \$3.94 per short ton. This, however, does not include the value of gold, silver and iron pyrites that were won as by-products.

These figures would give an average of 1.20 per cent., or twenty-four pounds per ton. Out of this amount the producing miner and railroads would seem to receive \$3.16 per ton and the smelter seventy-four cents per ton, but, as a matter of fact, the shipments of large quantities of low-grade or average ore does not take place; as the ore rock is either "cobbled," "matted" or concentrated before leaving the mine, or, as is the case with large mines, the ore is converted into metallic copper on the spot, thus saving freight on worthless gangue rock and proportionately increasing the operator's profits.

The rise of copper production in the United States has been as phenomenal as the rest of the evolution of this vast producing country. Starting out in 1835 with a production of less than ten tons, it rose to 100 tons in 1845, 3000 in 1855, 8500 in 1865, 18,000 in 1875, 130,461 short tons in 1890 and 307,943 tons in 1900. It will be noted that during the past ten years an annual advance of production equal to 177,482 tons per year was realized. However, the increase in production in the United States and other copper-extracting countries for 1900 over 1899 is not so marked as the expenditures in new mines would seem to warrant; but, as a matter of fact, this condition in the United States at least may be in part due to the time occupied in developing large copper properties and the installation of reduction plants. The financial depression in London resulting from diffidence of investors, the Boer war and the failure of the Hooley and Whittaker Wright companies, etc., has retarded British colonial developments and the proposed extension of work on the Spanish and South American copper fields, so that while the United States show a gain in production of 5.9



HOLLOWAY MINE, VIRGINIA BELT.

Southern copper are gratifying, because, after the closing down of the Ore Knob mines in 1886, the Southern States disappeared entirely from the market as factors in copper production, so that the present industry is entirely new. The backbone of the Southern copper industry at present is the Ducktown (Tenn.) field, where there exists an abundance of low-grade ore of great value, owing to the size and economic workability of the veins, that vary from two to 130 feet in thickness. The copper-bearing formation

and with assets of \$1,000,000 in cash, 13,157 acres of land and a reserve treasury stock of \$625,000 held over, to be used at the discretion of the directors for further working capital.

This company has demonstrated what money, backed by ability and push, can do in the Southern copper field. On these properties work has continued steadily from July, 1899, and by the first of January, 1901, had shafted, drifted, cross-cut and raised 4445 feet, besides diamond-drilling 1246 feet. All of the work, except

600 feet of cross-cutting, has been done in ore. Mr. J. Parke Channing, the well-known consulting mining engineer, in his able report to the company, says: "I estimate that there is in sight in the mines of the company, blocked out and ready for stopping, about 800,000 tons of ore, and that there is a reasonable assurance of there being 700,000 tons in addition, all of which is above the third level. The bottom level of the mine looks exceedingly well, and everything indicates a continuation of the ore in depth."

At the Burra Burra and London shafts new shaft-crusher houses 100 feet high are almost completed. Each one of these contains an 18x36-inch crusher, a 42x144-inch rotary screen, a 36-inch by 33-foot Robins picking belt, all driven by a 9x18x12-inch Ball & Wood compound engine. Each shaft-crusher house has bins with a storage capacity of 500 tons each.

At the Polk County shaft the old crusher building has been entirely repaired and a 36-inch Robins picking belt introduced.

The present equipment of boilers, compressors and hoisting engines is sufficient for the requirements of the Polk County and London shafts.

At the Burra Burra shaft entirely new equipment is being installed. This consists of a brick boiler-house containing 300 horse-power of boilers made by the National Water-Tube Boiler Co. A brick engine-house has been built containing a cross-compound two-stage air compressor with steam cylinders fourteen inches and twenty-eight inches diameter, air cylinders fifteen inches and twenty-four inches diameter, stroke forty-two inches, a twin 18x42-inch first-motion hoist provided with two cone drums.

Seven and one-half miles of standard-gauge railway, laid with oak ties and 65-pound new steel rails, has been completed. This connects the various shafts, roast-yards and smelter with one another and with the main line of the Atlanta, Knoxville & Northern Railway.

The equipment consists of two locomotives, 100,000 pounds weight each; twenty-two special gondola cars, capacity 60,000 pounds each, for handling green ore from the mines to the roast heaps; twenty-five Rodgers ballast cars of a capacity of 60,000 pounds each for handling roasted ore from the heaps to the smelter.

The road is provided with the proper roundhouse and four sets of 100,000-pound track scales, so that all material handled may be properly weighed.

Roast-yards have been graded of sufficient capacity to easily hold 83,000 tons of ore. They have been laid out in benches, with double tracks between the benches. Sheds for the roast heaps have been erected, and roasting commenced during the month of February.

Near Isabella Station, on the A., K. & N. Ry., is located the new smelter of the company. Ground was broken for this last May, and the construction is nearly completed.

The smelter proper consists of a steel building, in which are contained two water-jacket blast furnaces 56x180 inches at the tuyeres and eighteen inches from the tuyeres to charging floor; it also contains two converter stands, with six shells seven feet in diameter, ten feet six inches long, a 40-ton electric crane with a span of fifty feet. Necessary equipment of clay mill, elevator, etc., is provided.

The bins have a capacity of 2500 tons of ore and flux and of 750 tons of coke. The material for these bins will be conveyed to the blast furnace in two-ton charging cars, moved in trains of four by electric locomotives. Slag from the furnaces will be carried away in slag cars of forty-five cubic feet capacity each, also drawn by electric locomotives.

The combined boiler and power house is built of brick, with steel roof. This contains four water-tube boilers of 250 horse-power each, two cross-compound blast-furnace blowing engines. Each of these engines is capable of delivering 20,000 cubic feet of free air per minute against forty ounces pressure, and consist of two steam cylinders, 13 and 24x42 inches, and two air cylinders, each one of which is fifty-seven inches in diameter by 42-inch stroke. These engines have been especially designed for this work, have been built by the Nordberg Manufacturing Co., and are expected to give very economical results.

The converter blowing engine is capable of delivering 10,000 cubic feet of free air per minute against fifteen pounds pressure; steam cylinders are 15 and 30x42 inches, air cylinders each 40x42 inches.

Power for operating the electrical equipment and the rotary pump is generated by a medium-speed single-cylinder engine. The electrical equipment consists of 150-kilowatt General Electric Co.'s machine used for power circuit and a 25-kilowatt General Electric Co.'s machine used for lighting.

There have also been erected at the smelter plant temporary machine shop, laboratory and warehouse.



BIG YANCY MINE, VIRGINIA BELT.

During the year twenty-eight dwellings have been constructed on various parts of the property for the use of the employees. The construction of the proper residences for the manager and his assistants, also that of a new office, has been deferred until such time as the property is producing.

Shipments from the iron-ore bank leased to the Virginia Iron, Coal & Coke Co. have begun, and on the completion of the spur connecting the bank with the Tennessee Copper Co.'s railway extensive shipments may be expected.

Concluding his report Mr. Channing says:

"I expect that by the first of July next we will be running at the rate of a production of 8,000,000 pounds per annum. I do not expect that even with the drawbacks of having to operate with a new plant and inexperienced men our cost of production will exceed nine cents per pound of copper delivered and sold in New York."

Although competent authorities claim that the Ducktown copper vein will average 3.25 per cent., my own analysis, made from thirty samples of average vein matter, gave 2.50 per cent. of metallic copper, or fifty pounds of ore per ton. It is almost certain that during the year from July 1, 1901, to July 1, 1902, the production of copper in the Tennessee field will

be: Ducktown Company, 3,500,000 pounds; Tennessee Copper Co., 7,500,000 pounds—a total of 11,000,000 pounds, placing Tennessee next to Colorado as a copper producer.

The Virgilina, Virginia and North Carolina copper deposits are at present attracting considerable attention, and I had occasion to make a minute study of the region for Judge A. W. Graham, one of the largest property-owners on the belts, as well as for New York and English clients. It is probable that in this country copper, like gold, was first discovered by the English in Buckingham county, Virginia. In truth, the manuscripts that came under my notice some years ago at the British Museum in London, dated 1708, confirm me in this statement. The ore was not worked at that time, owing to its composition and the expense of shipping it abroad. This region has not been sufficiently prospected to admit of more than passing notice, although various croppings that I examined some years ago would warrant development. It is claimed by some authorities that these veins extend southward through Appomattox and Charlotte counties, where they enter Halifax county, Virginia, and cross the State line into Granville and Person counties, North Carolina. I cannot assume to deny

tion is contained in the notes of Colonel Byrd, who surveyed the Virginia State line in 1788-89. Prof. George B. Hanna says that the first development work took place in the early forties. It was not until 1890 that real development work was accomplished on the Yancey and Blue Wing."

Unquestionably, from all the information I can gather, nearly all the copper veins of the Virgilina district were located by Professor Emmons and a German geologist many years ago, and developments did not take place for want of transportation facilities, as is shown by the fact that immediately the Atlantic & Danville Railroad was completed work on the mines was begun. In the work of late surface prospecting great credit is due to Mr. Appleton Elliott and Mr. R. W. Harris, both local prospectors, who did much to locate the malachite cropping at the north end of the belt. The actual development of the High Hill and Chappelle mines is due to the able engineering qualities of Mr. Robert G. Lassiter of Oxford, N. C., who opened these properties for Messrs. Graham and Lassiter. What Mr. Lassiter did for the northern end of the belt Messrs. F. Durgy, J. Battershill, T. F. Frazier, Mr. Pannebacker, Sr., and G. Morong have done for the south end.

Mr. F. Durgy, in his method of developing the "Big Yancey" and "Durgy" mines, has taught an important lesson to native miners and prospectors that will redound to the lasting advantage to the belt.

In the Virgilina field all regular shipments of ore are made (except a few scattered tons occasionally derived from prospect shafts from properties that are being prepared for the market) from mines owned by outsiders who bought their properties at "ground-floor" prices. The operation of mines in this belt by companies has so far proved failures, owing to either the want of knowledge of the business or capital, etc.

The most important mine in operation, and the only one actually shipping ore from the belt, is the Holloway mine, owned by Mr. W. E. C. Eustis, the Boston millionaire mine-owner. The "Durgy," the "Yancey," the "Frazier," the "High Hill" and the "Chappelle" mines are in a sufficient state of development to ship more or less ore the moment they are connected with railroad communication, as are also several of the valuable prospects belonging to Messrs. Graham and Lassiter. The splendid group of properties owned by Mr. H. L. W. Hyde of Pittsburgh are worthy of mention, as doubtlessly they intersect every longitudinal vein of ore so far located in the belt, and the property is held as an investment.

This field is crossed by the Atlantic & Danville Railroad, the North & South Carolina Railroad, and is approached by the Richmond & Danville—all branches of the Southern Railway system.

In my report on the geology of the Virgilina field made for Senator A. W. Graham of North Carolina, Hon. Floyd B. Wilson, copper magnate, No. 30 Broad street, New York city, and others I say in part: "The geological period to which the Virgilina belt belongs is the Triassic; the country rock has a north and south 'strike,' the ore-bearing veins of quartz, quartzite, endurated slate, calcite, bastard gneiss, epidote, etc., inclining slightly west of north of the fundamental structure. With this exception the veins or reefs of ore-bearing matrix are at all places true to the general geological characteristics of the country rock and as free from serious faults and malformations as any aggregation of continuous veins. Of course, there are pinches and swellings, but these are purely local."

or verify this statement, not having examined the intervening territory between Buckingham county and Omega P. O. in Halifax county.

From Omega southward the mining camps of Virgilina are met with. This field, next to the Ducktown and Ore Knob, is the most important semi-developed copper deposit in the South so far brought to public notice, and as the Ore Knob deposits are not yet accessible by rail, the Virgilina field must rank as second in actual productive value.

In a recent letter Mr. W. Howard Pannebacker, surveyor and mayor of the town of Virgilina, who has studied the region with systematic labor, says: "The first discoverers of copper in this belt are yet unknown. Some years ago an old shaft was found on the north side of Dan river, some fifteen miles from Virgilina. No one knew of its existence before, and it was unwatered and cleaned out. Some copper as well as iron tools were found in the bottom of the shaft. They were of a pattern never before seen in this section. I saw some of them, and they remind me of similar ones that I saw at the Smithsonian Institute that came from Lake Superior; in fact, the consensus of opinion among those acquainted with the subject is that the excavation was made by the same people, but when? The first report of copper being found in this sec-

The Virgilina copper belt is from twenty-five to thirty miles in length and about five and one-half miles in width. The ores found are calcopryrite, tetrahedrite, malacconite, malachite, bornite and cuprite. The ore contained in the vein matter does not run uniformly, but rather in changeable-size shoots or streaks. As was noted by Prof. Walter H. Weed, the quartz veins seem to have a lenticular form, but their width rarely drops below the general width of the foliation.

Although the "Holloway" mine is operated upon the most economic principles

rail, and, consequently, shipments are being deferred. These mines are fully equipped with all necessary machinery, and the work that has been in progress during the past two years has been for the purpose of blocking out the ore preparatory to shipment. The ore I examined in the ore bins will give about 18 per cent. metallic copper and some silver and free gold, and I estimate the average run of the veins at 8.5 per cent. The gold in certain streaks in the vein promises to be a most valuable by-product, but so far as shipments of ore that have been made are

Its suspension is another evidence of what dissolute company promotion and bad management will do to the injury of a whole section. As this property is now in the market I do not care to express an opinion as to its value, although its past achievements seem favorable. This mine is within 100 feet of railroad facilities.

Succeeding the development work executed by Mr. Robert G. Lassiter on the High Hill mines, the properties were sold to the Virginia Copper Co., and great activity has prevailed since August, 1900. Seventy-five thousand dollars were set aside for developments, and a large plant is now on the ground. Office and other buildings have been erected and some underground work done. This mine should become a large producer of copper, as the property, as far as developed, shows signs of undisputed merit and is said to be backed by such capitalists as ex-Mayor Abram S. Hewitt, State Senator Veters and McCoon & Co. of New York. The property is under the direct management of Mr. Lamb, C.E., and a corps of mining engineers. Some ore is now ready for shipment, and, in fact, when the property was in the hands of the Boston syndicate picked ore was extracted and shipped. Last week hoisting of ore began at shaft No. 4.

While I have personally examined this property with some degree of care, I prefer to quote Prof. H. F. Wild, the well-known English mining engineer, who made a report for Mr. Frank Butterworth and the New York company. He says: "The property consists of 612 acres extending along the ridge 10,000 feet." This means that there are 10,000 feet of vein matter. "Basing my calculation upon my study above and below ground, I think it safe to estimate that the vein will produce above the present bottom of shaft No. 4 * * * about 12,000 tons of 20 per cent. ore, * * * leaving a profit of \$600,000. With about six months more work, during which time the ore produced would more than pay the cost, the mine should be in a condition to produce twenty tons of 20 per cent. ore per day."

even then there would remain a net profit (according to Mr. Wild's estimate of percentage) of \$120,000 per year. Of equal value with the High Hill mine is the Chappelle property that adjoins it on Hyco river.

Besides the mines already described there are in the Virgilina belt the following prospect shafts: The Gilles, the Tingen, the Copper World, the Wallack, the Walker, the Morong, the Fourth of July, the Anaconda, the Wall, the Bob Tuck and many others now under investigation. I estimate that the properties just named are capable, collectively, of producing a yearly output of 15,000 tons of 4 per cent. ore. I estimate the possible yearly output of metallic copper from present developments as follows:

	Tons ore.	Lbs. metal.
Durgy and Yancy mines.....	9,000	1,500,000
Holloway mine.....	7,000	700,000
Blue Wing mine.....	1,500	165,000
Frazier mine.....	3,000	270,000
High Hill mine.....	6,000	1,200,000
Other mines.....	15,000	900,000
Total capacity 1901 and 1902..	41,500	4,735,000

The average percentage of all the workable veins in the Virgilina field would be approximately 5½ per cent. metallic copper. However, benches of ore averaging 40 and 45 per cent., and even more, in copper are not infrequently found and are used as samples by people having properties to sell.

In this belt the town of Virgilina has sprung up during the past few years, and the whole section seems to be moved by the quickening impulse of successful developments. No better opportunity is offered the legitimate miner than this rich copper belt.

In conclusion, I find:

1. That the Southern States possess at least three copper deposits of proved value—the Ducktown, the Ore Knob and the Virgilina—although in nearly every Southern State copper in more or less quantity is found, but, in most cases, it exists in narrow streaks, and has not been sufficiently developed to attract investment.

2. That the developments already ac-



FRAZIER MINE, VIRGILINA BELT.

and with a poor or no equipment as compared to the output and consequent value of the mine, railroad returns show that approximately 17,000 tons of ore have already been shipped to Eustis smelter at Norfolk, Va. While a much higher percentage is claimed by mining men in the region, I am safe in estimating an average of 5 per cent. on the total shipment, equal to 1,700,000 pounds of metallic copper, valued at \$272,000. This is the production of over two years. The average value of the ore shipped, taking thirteen cents per pound for copper ore as the basis, would give a value of \$13 per ton for the ore shipped, or \$16 per ton for the metallic copper. The cost of producing metallic copper in the Virgilina field should be: To mining, four cents per pound; to freight on ore to Norfolk (5 per cent. ore), one and one-half cents per pound; to smelting, three and one-half cents per pound—total, nine cents per pound Norfolk. In these figures I assume that the ore be sold to the smelters and include their profit, but, as a matter of fact, the Holloway mine smelts its own ore at Mr. Eustis' reduction works at Norfolk. In this connection I would say that there is no better business opportunity in the South than the building of reduction works at Virgilina.

Unquestionably, at present, Mr. Eustis controls the copper situation in the Virgilina field not only by having a valuable mine in operation upon business-like principles, but by having good railroad facilities, a smelter and a group of valuable properties outside of the mine now in operation. The depth of the Holloway is about 700 feet, and I am of the opinion, based upon what I learn of the lenticular sulphur veins of Louisa county, Virginia, that the Virgilina mines, especially those in North Carolina, will improve with depth. The ore in the Holloway is glance (chalcocite).

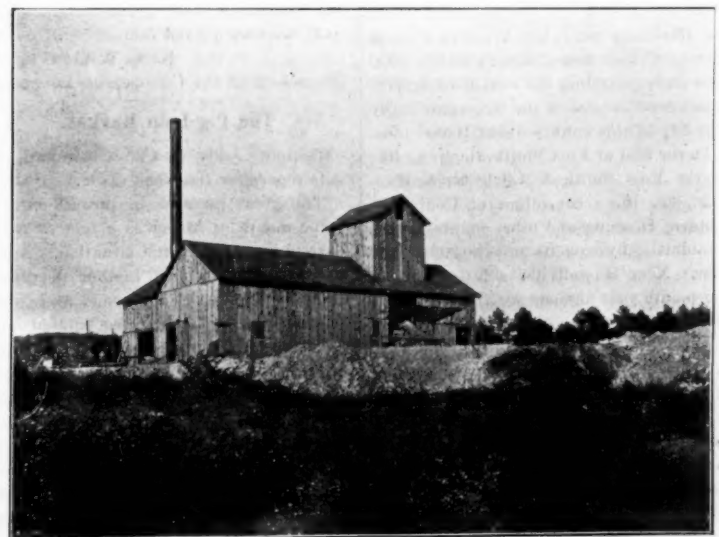
Next in degree of immediate importance are the properties of Mr. F. Durgy, a Western miner of established reputation and ability, who, like Mr. Eustis, essayed to invest his own money to prove the value of his two mines, the Big Yancy and the Durgy, and who, unquestionably, owns the best prospects and mines in the belt, although they are not yet connected by

concerned no returns have been of gold by the smelters. This is due to the fact that the gold is in a free state, and does not pass the meshes of the screen, as the crusher or stamp pounds it into flat discs.

I estimate that the two Durgy mines, as far as developed, could be relied upon to give a production of forty tons of ore per day, averaging an annual output of about 1,500,000 pounds of metallic copper. The predominating ore in these mines is glance (chalcocite) and peacock (bornite), with occasionally beautiful specimens of malachite and cyanotrichite.

The Frazier mine, opened by Mr. T. F. Frazier, a well-known Pennsylvania oil operator, proved beyond a question of doubt the great value of the western vein in this field, and unless a chimney or pocket of ore has been struck the owners are to be congratulated, as the width of the vein seems to be over sixty feet, and foot and hanging walls have not yet been found. Mr. Frazier undertook these developments in the face of ridicule on the part of Paris-green prospectors, and purely as an experiment and pastime, with the result that perhaps one of the best ore bodies in the South has been located. The depth of the prospect is about eighty-five feet through a solid mass ore-bearing gneiss-like endurated slate, epidote interlaced with narrow seams of quartz and calcite. The ore itself is a mixture of glance (chalcocite), gray copper (tetrahedrite) and peacock (bornite). The whole mass would probably average 4 per cent. in metallic copper. This mine, too, awaits the construction of a spur track from the main stem of the Atlantic & Danville Railroad. If this should prove not to be a pocket large shipments of ore may be anticipated within a year. The present capacity of the property is about ten tons per day.

The Blue Wing mine belongs to the Boston & Carolina Copper Co., and has been closed for over two years. The mine was started by the late Mr. Raker and is well equipped. It is claimed that even during development times nearly \$18,000 worth of ore was shipped. The ore from this mine is peacock (bornite), and the depth of the mine is 180 feet. This same company owns in addition to this mine quite a group of properties, some of great value.



DURGY MINE, VIRGILINA BELT.

As more than six months' work has already been done not only on shaft No. 4, but on various shafts since Mr. Wild wrote his report, it is safe to say that if his hypotheses are correct this mine is today ready to ship at least 6000 tons of 20 per cent. ore per year, equal to 2,400,000 pounds of copper ore, valued at thirteen cents per pound f. o. b. at the mine, \$312,000. Professor Wild gives an estimate for mining and smelting equal to \$14 per ton, or three and one-half cents per pound. However, eight cents per pound will be much nearer the cost, and

completed are capable of supporting an annual output of—

	Pounds.
The Ducktown deposits.....	11,000,000
Virgilina deposits.....	4,735,000
Total Southern production.....	15,735,000

3. That owing to cheap and reliable labor conditions, an abundance of cheap coke for roasting and smelting, the abundance and varieties of fluxes suitable for the reduction of all classes of copper ores, and water-power for the production of metallic copper electrolytically, copper may be produced in the Southern States at an

average of eight and one-half cents per pound, and that, consequently, much lower grades of ore may be profitably worked in the South than in any other section of America.

4. That the proximity of the Southern copper deposits to the manufacturing centers of the North and the ports of the Atlantic give it advantageous freight rates to the markets of the world, although the present local demand for the metal exceeds the output.

5. That although the Southern copper is in a healthful state of progression, there are many opportunities for increasing the production by developing new fields and extending work in those already proved.

6. That the copper output of Tennessee from July 1, 1901, to July 1, 1902, will equal, in pounds, the output of Colorado, while the profit on the metal delivered in New York will exceed it by 33 per cent.

[The illustrations accompanying this article are from photographs made by Mr. W. H. Pannebaker of Virgilina, Va.—Ed.]

COAL IN ARKANSAS.

Development in the Region Tributary to Fort Smith.

[Special Cor. Manufacturers' Record.]

Fort Smith, Ark., April 13.

The coal development in this great "black diamond" basin is making wonderful progress. The coal area of which Fort Smith forms the center embraces, according to the government census, 29,100 square miles. Of this 9100 is given to Arkansas and 20,000 to the Indian Territory. Up to the present time the largest per cent. of the output inside the State has come from Sebastian county, of which Fort Smith is one of the county-seats. The principal mines of the county are located from ten to twenty-five miles south of this city. Among them are the Prairie Creek Coal Co. and the Kansas & Texas Coal Co. at Huntington, which have gradually increased their output until they now have a possible daily capacity of over 2000 tons each. The Central Coal & Coke Co. of Bonanza turns out 1500 tons daily; the Western Coal & Mining Co. of Jenny Lind exceeds 3000 tons daily. Adding the output of several smaller mines makes the aggregate daily capacity of this county about 10,000 tons.

To the east of Fort Smith, along the line of the Fort Smith & Little Rock Railroad, are the great mines of Coal Hill, Spadra, Denning and other points, whose combined daily capacity now runs up to 3000 tons. Near Russellville, a little south of the points just named, are the celebrated Onyta mines, which turn out the only real anthracite coal so far found in this area. All the other coal is called semi-anthracite and semi-bituminous. The Onyta coal sells in competition with the Pennsylvania anthracite. On the line of the Arkansas Central, which is a new road lately constructed from Fort Smith to Paris, Logan county, Arkansas, quite a number of new openings are in operation already, and the coal is of a very fine quality. Within the last two weeks several very large beds of coal were accidentally laid bare on the line of construction of the Arkansas Western Railroad, a few miles south of this city, on the edge of Scott county. The veins are said to be very large, ranging from five feet to twelve and one-half feet in thickness. To the north of Fort Smith mining has not progressed so rapidly, though it is claimed to be very valuable coal territory. The western limit of this city is the eastern border of the Choctaw Nation, Indian Territory. This Nation is practically underlaid with coal. As yet the principal

output is all along the Choctaw, Oklahoma & Gulf Railroad from the western border of the State of Arkansas to South McAllister. Gradually other localities are being operated. There are several mines on the extension of the St. Louis & Santa Fe Railroad from Fort Smith to Paris, Texas, and a number of openings along the Kansas City Southern Railroad, all of which are increasing their output very fast. At Howe, on the latter road, several hundred coke ovens are now in operation, and that industry is becoming quite a potent factor in the calculations upon the future prosperity of this section. The largest per cent. of our coal is adapted to make the best of coke. The total output of the coal mines of the Indian Territory for the last year was about 2,000,000 tons. The output this year, if no strikes interfere, may double that figure.

The coal of the western half (Indian Territory) of this basin is a fine gas coal, while that of the eastern half (Arkansas) is not so well adapted for gas; it is, in fact, a smokeless coal, and being such an excellent steam coal, it is a great favorite with the railroad engineers. Several tests as to the number of miles a locomotive makes with the different coals near here have been made and shows the following result: Missouri coal, 22.87 miles; Illinois coal, 19.73 miles; Arkansas coal, 28.43 miles.

Recently a party of capitalists, in examining a line of survey for the Fort Smith & Western Railroad into the Western coal fields, found a six-foot vein of coal within a few miles west of the city.

The foregoing demonstrates the importance of this coal field, not only because of the many superior qualities of the product, its inexhaustible quantity and great area, but because it is practically the only great coal basin in the entire Southwest for the supply of this part of our country, and having no coal field between it and the Gulf, it will doubtless be required to furnish all the coal for export via the western Gulf ports to foreign markets, which is already a factor in the export business, and will become much more potent whenever the great interoceanic canal becomes a fixed fact.

S. A. WILLIAMS,

Secretary of the Commercial League.

The Pig-Iron Market.

Matthew Addy & Co., Cincinnati, in their report for the week say:

"The great increase in furnace stocks in the month of March is a fact of foremost importance in the situation. April will probably show a further decrease, for shipments are being made at a phenomenal rate. As we have pointed out, stocks are not being accumulated by consumers, but iron is being turned into finished products as rapidly as it is received. There is a constant demand for faster shipments on old contracts. In fact, in some lines of trade business is so active that it is almost impossible to quite meet the views of customers in regard to shipments. At the present time there is a steady demand, with no transactions of great magnitude, yet the aggregate tonnage is wholly satisfactory. The past week has been busy, but not excited, with buying mainly for shipment after July. It needs hardly to be stated that prices are firm, and buyers have so fully recognized the state of affairs that there has been no serious attempt to shake quotations. All grades of iron have been in demand, and no one particular grade has been a leader. At the present time several important inquiries are on the market, and it is probable before our next report that these inquiries will be turned into actual orders."

FOR THE DOMESTIC TRADE.

This Year's Demands in the Birmingham Market.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., April 16.

During the past week there was a further easing up in the demand for iron, but there was no easing up in prices. In fact, there were some sales of iron at prices higher than have prevailed heretofore. No. 1 foundry sold in one case at \$13 and No. 2 foundry at \$12.25, yet one can buy No. 1 foundry at \$12.25 and No. 2 foundry at \$11.75. The only explanation of the difference is that a certain make was wanted and the price of it was as stated above. There is no change in quotations, though in some cases conditions were such that 25 cents additional was obtained. Gray forge is still \$10.50 to \$10.75; No. 4 foundry, \$10.75; No. 3 foundry, \$11.25. Some silver gray went at \$12.50. There is a continued inquiry for basic iron, but it is difficult to obtain, except for long-deferred deliveries. It is quoted yet at \$12. The lull in activity of demand creates no surprise, and the sellers are not a bit uneasy concerning it, as they are satisfied that there are large requirements to be provided for in the near future. It is significant that the urgent requests to hurry shipments of deliveries falling due continue, and the propositions to anticipate time of delivery have not ceased. Only one inference can be drawn from these facts, and that is that stocks in the hands of melters are scant. There has been a cry of increase in production by the pessimistic members of the trade, but the records show a decrease of stocks for March in the furnace yards amounting to nearly 70,000 tons. In this district more furnaces will blow out than will blow in during the coming summer.

All the demand we have had this year has come from the domestic trade. The export trade has cut no figure in it, and the outlook for the near future concerning its revival is very poor.

It is interesting to note a continued improvement in our furnace practice. For the benefit of those who assert that this district makes principally low-grade iron the run of one furnace built for a daily output of 150 tons is herewith given for one week: The turnout was for No. 1 foundry 316 tons, and for No. 2 foundry it was 761 tons; for No. 1 soft it was 79 tons, while for No. 2 soft it was 166 tons; the total was 1322 tons. While such a record cannot be shown by all our furnaces, there is a constant improvement in this respect.

Some radical changes will be made in the conduct of affairs in the Tennessee Company. Heretofore the company has had its ore mined by contract, and the contract firms have been separately incorporated, though to all intents and purposes they were the children and the Tennessee Company was the parent. The contracts will be discontinued hereafter, and the mining of ore will be under the direct control and supervision of the company.

The demand for steel continues good, and the steel mill is booking orders to its capacity to supply.

The rail mill is now roofed, and some of the machinery is being installed.

Direct information from the bar and rod mill is to the effect that business is booming, and they are running night and day to keep within sight of it.

The edge is dulled of the keen demand for coal that has prevailed. So many new mines have been opened that production will by next season be so materially increased that the coal-carrying roads must largely increase their capacity to promptly

handle the trade. While the roads are almost constantly receiving additions to their rolling stock, it is so quickly absorbed by the keen demand for it that the deficiency still prevails.

In real estate there is a good steady demand for investment for both business and residence properties. It is a notable fact that there are very few speculative deals in it.
J. M. K.

CASSAVA AND CANE.

Brunswick's Board of Trade Encouraging Their Culture.

Upon the initiative of the Board of Trade of Brunswick, Ga., a convention was held last week at Brunswick for the purpose of promoting the cultivation of cane and cassava in Georgia and Florida. Experts from the two States made addresses, and practical results are expected. Reviewing the proceedings, Col. C. P. Goodyear of Brunswick writes to the Manufacturers' Record as follows:

"The Board of Trade had procured, in connection with the commissioners of Glynn county, 20,000 hills of cassava seed, which were in large part divided to farmers who pledged themselves to report upon its cultivation and harvesting to the Board of Trade and to replant the seed from the crop.

"It is not too much to say that the two ideal money crops were discussed at this convention for the South Georgia farmer, and that each has passed the stage of experiment, nor is it too much to say that this initiative of the Board of Trade of Brunswick will have great and far-reaching beneficial results to the country and city.

"A starch factory with ample capital is promised as soon as there are 1000 acres in cultivation in cassava within 100 miles of Brunswick. A sugar refinery is under consideration, and there is ample syrup in sight to keep a \$150,000 plant steadily running."

According to Colonel Goodyear, the convention developed the fact that Georgia highland cane yields nearly as many tons of cane per acre as Louisiana lands, and that each ton contains a greater proportion of sugar; that 500,000 barrels of syrup are now made and sold from South Georgia alone; that the demand for sugar in this country is far greater than any possible supply that can be made here for years, and that the demand for syrup is steadily increasing far beyond any probable supply from all sources.

The discussion of cassava showed that the demand from starch factories in Florida far exceeded the total supply; that farmers were paid at their door for cassava roots from five to six dollars per ton, according to distance from factory; that as a food crop for the feeding of stock cassava was excellent; that ten tons per acre is a fair average crop, and that it stands in the hill where raised until ready to be fed to stock or to be sent to the factory.

Current History of Boston is specially designed to serve the busy reader. It sums up monthly the important news of the world, carefully sifted of non-essentials and bringing out clearly the cardinal points of recent progress along all lines. A half-hour will post the reader on all the leading questions of the day. The April number is abundantly illustrated, and gives prominent space to the Chinese negotiations, Cuban and Philippine problems, tariff war with Russia, relations of England and Germany, The Hague tribunal of arbitration, industrial consolidations, the riots in Spain, the service of missions, the new star in Perseus, printing without ink, etc.

PROGRESSIVE RALEIGH.**An Exhibit by the City's Chamber of Commerce.**

The Chamber of Commerce at Raleigh has done a good work in sending broadcast a printed sheet calling attention to the advantages of the capital city of North Carolina and presenting a record of its achievements. The city is the home of the agricultural and mechanical college and other institutions of learning of one kind or another, with nearly 5000 students in attendance. Special attention is given in the broadside to the College of Agriculture and Mechanic Arts, which has grown from one building and five teachers in 1889 to twelve buildings, twenty-five teachers and 300 students. Its purpose is to furnish technical and practical education, to train farmers, mechanics, engineers, architects, machinists, electricians, chemists, mill workers, stock-raisers, fruit-growers, truckers, dairymen, etc. There is a great demand for alumni of the college. Many of them are called away even before graduation to do work of great responsibility, and every year three or four times as many graduates as the college can furnish are sought. Public improvements have been made on a considerable scale during the past few years, and among the industries recently added and improvements to existing plants are the following: The Melrose Knitting Mill, for manufacture of men's underwear; the Willard & Ashe Hosiery Mill, for which a new brick factory is now being erected; the Copperville Brick Co., with the most approved steam brick machinery; the electric plant at Millburn, on Neuse river; a large cotton mill at Falls of Neuse, owned in Raleigh; the Snow shuttle-block factory, the Norwood cigar factory, the Pogue plug-tobacco factory in new quarters, large additions to the Caraleigh fertilizer works, the cottonseed-oil mill, the Caraleigh gingham mills, the Raleigh yarn mill and the Pilot plaid mills.

Referring to these the Chamber of Commerce says:

"These works were already of large proportions, but with the increased demand they have been compelled to make additions and improvements. A new wood-working plant at the North Carolina Works; annex to the State Agricultural Museum; the Olivia Raney library building, and 6000 volumes; three-story granite-front building for North Carolina Home Insurance Co., erected by the Vass estate; new building at St. Mary's; the Baptist University; Methodist Orphanage buildings; the Presbyterian church, the largest church building under one roof in the city; large hospital building at the Soldiers' Home, with a large number of handsome and costly residences.

"The Water Company has greatly enlarged its plant. An entirely new system of works and mains have been put in by the Raleigh Gas & Electric Co. at a heavy cost.

"The city of Raleigh rejoices in the completion of the Greater Seaboard Air Line Railway, which places our city on the through route from Boston to Florida; also appreciates the advantages of being on the line of the Southern Railway system, all giving to our citizens the advantages of frequent trains and competitive rates.

"This city now has free rural as well as city postal deliveries, and with greatly-increased business reported by the post-office, banks, manufacturers, merchants, and by the real-estate, tobacco and cotton operators, and can confidently anticipate a continued increase of business prosperity.

"The Chamber of Commerce has taken

up the subject of having an up-to-date winter resort hotel built for the accommodation of Northern visitors who now pass our depot in increasingly large numbers, many of whom could be induced to stop, provided the city was prepared to accommodate them."

The officers of the Chamber are Messrs. Josephus Daniels, president; Frank F. Ward, Charles Pearson, T. B. Womack, vice-presidents; George Allen, secretary, and Joseph F. Pogue, treasurer.

Exports to Mexico.

The variety of goods of American manufacturers being sold in Mexico at present is indicated by the cargo of the steamship Atlas, which recently cleared from New Orleans to Mexican ports. It carried a private car for the general manager of the Vera Cruz Railroad valued at \$10,000, a quantity of cotton, as well as consignments of dry goods, hats and caps and miscellaneous machinery. Another ship of the Mexican-American Line is about to leave New Orleans with a large locomotive and 200 freight cars. The company has found it necessary to increase its terminals at Progreso, Mexico, and will add 500 feet to its wharf front in that city.

Minerals of Alabama.

Mr. J. B. Gibson, secretary of the Geological Survey of Alabama, reports the following mineral statistics of the State for 1900: Coal, 8,504,327 short tons; coke, 1,992,561 short tons; pig-iron, 1,155,583 long tons; iron ore, 3,095,406 long tons; limestone for flux, 534,061 long tons; dolomite for flux, 351,934 long tons; building stone, 216,817 cubic feet; bauxite, 650 long tons; ochre, 62 long tons; lime, 650,664 barrels; vitrified or paving brick, 7,000,000; refractory or fire-brick, 6,760,000; common brick, 50,700,000.

Imports of Iron Ore.

The imports of ore for the plant of the Maryland Steel Co. at Sparrow's Point have been very extensive recently, and the indications are that during the next month about 40,000 tons will be received from the mines in Eastern Cuba alone. It is expected that seven cargoes will be received by May 3, not counting shipments from the Spanish and other mines.

Among the articles in the May issue of Cassier's Magazine of illustrated engineering are the following: "Niagara Falls Power," by Harold W. Buck; "Speed Regulation of Water-Power Plants," by Allan V. Garratt; "The Copying of American Machinery," by Joseph Horner; "Steam Boilers at the Paris Exhibition," by W. D. Wansbrough, and "Liquid Fuel," by E. L. Orde.

Assessments of railroad property made recently in Alabama show an increase in value for 1900 of \$2,564,000 compared with the previous year. It is notable that of the increase \$1,000,000 represented the Southern system alone. The total assessed value is placed at \$50,743,000.

The freight depot being constructed by the Louisville & Nashville Railroad Co. at Mobile, Ala., is 600 feet long, 55 feet wide, and the material used are brick and steel. A portion is divided into offices for the railroad clerical force. The cost of the structure will be \$70,000.

The steamer Dorchester of the Merchants & Miners' service has been undergoing extensive repairs and improvements, which have just been completed. The Dorchester has gone into service upon the route between Baltimore and Providence.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

More Terminals at New Orleans.

New Orleans' importance as a shipping center promises to increase. The recent sale of the docks, warehouses and railroad at Port Chalmette has resulted in arrangements being made to issue \$1,000,000 in capital stock and \$2,500,000 in 4 per cent. bonds by the New Orleans Belt & Terminal Co., the title of the organization at present in control. It is stated that much of the proceeds of the bond issue will be used in making improvements, and possibly extensions to the railroad. W. C. Dotterer has been elected president and C. B. Van Nostrand vice-president of the company. Mr. Van Nostrand is quoted as saying that the railroad will be extended to connect with all systems entering New Orleans, including the Kansas City Southern Railroad, which is said to be making arrangements to reach the city by way of Alexandria, La.

A partial confirmation of the report that the Illinois Central intends increasing its terminal facilities is found in the sale of the property of the Independent Cotton Oil Co., located on the Mississippi river adjacent to the Stuyvesant docks. Representatives of the Illinois Central have purchased the property for \$102,000, and it is understood that a part of it will be used as a site for the million-bushel grain elevator, the erection of which the company has been considering. With the last purchase the Illinois Central will have a water front in this portion of the city alone over a half-mile in length.

To Reach Coal Mines.

In a recent issue of the Manufacturers' Record reference was made to the Campbell's Creek Railroad, for which contracts have recently been let. It is to form an extension of a railroad controlled by the Kanawha & Ohio Co. of Malden, W. Va. Mr. J. E. Dana, superintendent of the company, informs the Manufacturers' Record that the extension, which will be twelve miles in length, will be completed during the present year, and will open up a tract of 1350 acres of coal land. Mining operations will probably be begun on other property adjacent to the tract. The Campbell's Creek Co. expects to mine about 1500 tons daily from the deposits referred to.

Central of Georgia Traffic.

The board of directors of the Central of Georgia Railway Co. has approved of the construction of 300 freight cars at the Savannah shops, and has ordered three sleeping cars, and five consolidated locomotives for freight purposes. It is understood that fuel for the engines will in future be secured from mines along the Chattanooga, Rome & Southern Railway, recently acquired by the Central. For its ocean service the company has contracted for a steamship to ply between Savannah and New York, to be constructed at the works of the Delaware River Shipbuilding & Engine Co. of Chester, Pa.

Richmond & Petersburg Line.

In a letter to the Manufacturers' Record Mr. J. F. Pfetich, general manager of the Cleveland Construction Co., writes that all contracts have been let for the necessary material for building the Richmond & Petersburg Electric Railway between Manchester and Petersburg and considerable work completed. One order for rolling stock includes an electric motor, eight flat cars and six passenger

coaches. The company is considering an extension of the electric system on several streets of Richmond, but has reached no decision.

Gainesville to Dahlonga.

Another plan to build a railroad in North Georgia between Gainesville and Dahlonga is being promoted by a company entitled the Gainesville & Dahlonga Electric Railway Co., which, it is reported, proposes securing power from the Chattahoochee river and to construct a street-railway system in Gainesville and branches to several cotton mills. A company is being formed, of which Hon. A. J. Warner is to be president, to build the road. H. H. Dean of Gainesville is also interested.

Heavy Live-Stock Shipments.

An idea of the expansion of live-stock traffic on Texas roads can be gained from the fact that the Gulf, Colorado & Santa Fe Railway Co. recently shipped 2000 carloads from towns on its San Angelo branch alone to Indian and Oklahoma Territories and Kansas. During one day sixty trains were made up on the branch. It is expected to transport 250,000 head of sheep from Texas this spring.

Proposed Electric Line.

A gentleman interested in the scheme to build an electric railroad between Baltimore and Washington writes to the Manufacturers' Record that surveys of the route are now in progress with the view of beginning construction as soon as possible, probably during the present year. A branch will be built to Annapolis.

To Be Built at Once.

Mr. Howard Cole of Vicksburg, Miss., writes the Manufacturers' Record that there is no doubt that the Louisiana & Arkansas Development & Construction Co. will construct as soon as possible the railroad between Lake Providence and Vidalia, La. It is expected to be completed by January 1.

Railroad Notes.

The order recently placed by the St. Louis Southwestern Railway Co. for rails aggregates 10,000 tons, which will be used in relaying eighty-five miles of its line.

Representatives of the Southern Railway Co. have purchased what is known as the New Albany Belt & Terminal Railroad, which includes a bridge over the Ohio river between New Albany, Ind., and a suburb of Louisville.

The Southern Railway Co. has recently completed a coal hoist at Mobile, Ala., which has a capacity for transferring 120 tons an hour, or three carloads. It is intended for loading vessels at this port, and has a storage capacity of about 2000 tons.

The Western Maryland Railroad Co. has awarded contracts for its improvements, including several bridges to be built by the American Bridge Co. of New York and the Pencoyd Works of Philadelphia, and has given an order for rails to be manufactured by the Cambria Steel Co. of Johnstown, Pa.

The Banner Lumber Co. of Kentwood, La., is interested in an important railroad project in Tangipahoa parish in this State. It is called the Kentwood & Eastern Railroad, and in a letter to the Manufacturers' Record Mr. E. V. Preston, superintendent, writes that the rails have recently been purchased for an extension seven miles in length, which will make the total distance covered by the line thirty-five miles.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Round-Baled Cotton in Court.

The New York Commercial says:

"In the annual report of the board of directors to the shareholders of the Planters' Compress Co. for the thirteen months ended with December 31 last much space is naturally given to the record of progress made during the year in the use of the round cotton bale throughout the South—a matter that the Commercial has frequently urged upon the attention of the planters and shippers. All the incidents in connection with the petitions to the Texas railroad commission to grant a reduction in freight rates on the improved bales of increased density are reviewed, and the statement is made that the case now in the courts, growing out of the commission's refusal to act, will probably be reached this month.

"It is confidently believed," says the report, "that both the logic and the law of the situation are with the petitioners, and that the courts will take such action as will result in a material reduction of the rate."

"As we have before demonstrated in these columns, it is clearly to the advantage of the railroad companies to handle cotton in the improved bales. On certain Texas lines they get almost double the revenue from cotton in round bales than they do from the product baled in the old way—the square bale that Edward Atkinson has called 'the most atrocious, barbarous, unsafe, wasteful and unsuitable package in which any staple of commerce is put up anywhere.' Still the railroad managers withhold their co-operation from the companies which are seeking to stop all this waste and risk, and the railroad commission, admitting the advantages of the round bales, still refuses to give its sponsors a hearing, on the ground that the action requested—enforcement of lower rates—would 'force the abrupt abandonment of a very large number of gins and compresses in this State, and force producers and dealers in cotton to adopt new machinery which now handles only one-tenth of the 3,000,000 bales produced annually in Texas.'

"These are the best reasons in the world why the other nine-tenths of the crop should be handled intelligently and safely and at an increased profit to the grower of from \$3 to \$5 a bale. The sooner the old gins and compresses get 'forced' out of use the better it will be for Texas. A system of baling that imposes a loss of \$40,000,000 to \$50,000,000 a year on the cotton crop of this country has few defenders outside of the compressmen and one railroad commission. The Texas courts ought to set the pace for a general movement against the old system."

The Davis Cotton Mills.

The application for charter of the Davis Cotton Mills, projected by Augusta (Ga.) parties, was announced last month. Mr. Charles Warren Davis, the promoter of the enterprise, has organized several other successful cotton companies during recent years. Mr. Davis states that books of subscription to the capital stock of \$200,000 are now open and that the stockholders will meet about May 1 to effect

permanent organization. The company will organize with the \$200,000 capital in equal parts of preferred and common stock, the former to bear interest at 3½ per cent. semi-annually.

As previously stated, the proposed mill will have an equipment of 10,000 spindles and 360 looms, and will be located in South Carolina, near Augusta, Ga.

The incorporators were Messrs. Chas. Warren Davis, E. S. Johnston, H. Gould Barrett, Bryan Lawrence and others, all of Augusta, Ga.

To Add 10,000 Spindles.

Announcement is made at Columbus, Ga., of an extensive enlargement and improvement to the Muscogee Mills in that city. The Muscogee Manufacturing Co. owns the plant, and has just purchased from the city a site upon which the new buildings will be erected. These structures will include a large modern dyehouse and the enlargement of the present plant by an addition of 10,000 spindles. The expenditure will probably be close to 200,000. The present plant operates 13,836 spindles and 433 looms, being capitalized at \$157,000.

The Cotton Movement.

In his report for April 12 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the 224 days of the present season was 9,127,677 bales, an increase over the same period last year of 721,824 bales; exports were 5,228,310 bales, an increase of 227,629; takings by Northern spinners, 1,683,101 bales, a decrease of 386,615; by Southern spinners, 1,075,169 bales, a decrease of 43,872.

A \$50,000 Mill.

The stockholders of the Mary Etta Mills of Shelby, N. C., lately mentioned as incorporated, have met and organized by the election of E. L. Jenkins, president; W. T. Grigg, vice-president, and J. H. McBrayer, secretary-treasurer. The secretary states that details as to mill have not been determined yet. Cotton warps and yarns will be manufactured. Building will be two stories high, 50x150 feet. Water-power will be used. Capital stock is \$50,000.

Textile Notes.

The stockholders of the Greenwood (S. C.) Cotton Mill will meet May 7 to consider issuing \$100,000 preferred stock at 7 per cent. per annum.

S. S. Broadus of Stevens, Ala., is organizing a company to build a cotton mill, the capital having been subscribed. A site for the mill has been donated.

The York Cotton Mills' stockholders will meet at Yorkville, S. C., April 23 to consider issuing \$75,000 of first mortgage bonds bearing interest at 7 per cent.

Henry F. Jennings of Cope, S. C., contemplates the establishment of a mill for manufacturing handkerchiefs, and asks for complete information regarding such an industry.

The annual meeting of the Southern Cotton Spinners' Association at Atlanta has been postponed from May 9, as it was first announced, until a date to be named later.

J. A. Smith, manager of the Denison (Texas) Cotton Mills, has submitted a proposition to citizens of Culvert, Texas, for the erection of a \$55,000 cotton mill in that town.

Messrs. R. B. Phillips and Geo. C. Wallace of Paducah, Ky., have purchased a controlling interest in the Alden Knitting Mills, and it is contemplated to increase

capital \$10,000 for improvements and enlargement.

Messrs. D. J. Griffin, G. N. Henson, M. M. Hedges, J. F. Casey and others of Chattanooga, Tenn., will organize company to build a cotton-batting mill. The required stock has been subscribed.

Messrs. C. M. and Orlanda Elam of Shelby, N. C., will establish the Lura Knitting Mill at a cost of probably \$10,000. Site has been bought and contract for building will be placed at once.

The Mascot Knitting Mills, Sweetwater, Tenn., has not decided to what extent the improvements mentioned recently will be undertaken. The company may remove its plant to Dalton, Ga., and double capacity there.

F. A. Cumnock of the Smithfield (N. C.) Cotton Mills is trying to organize a \$100,000 stock company to build a plant of 5000 spindles and 300 looms for the manufacture of print cloths, the mill to be located in Louisiana.

J. G. Jones of Cordele, Ga., representing capitalists, has submitted a proposition for the organization of a knitting company in Adel, Ga. The proposition provides for the erection of a \$30,000 mill if Adel investors will take a third of the stock.

Mr. Henry F. Jennings of Cope, Orangeburg county, South Carolina, writes to the Manufacturers' Record that he desires to get into communication with someone who may give him detailed information about the manufacture of handkerchiefs.

The Scotland Neck (N. C.) Cotton Mills, manufacturer of hosiery and ribbed underwear, will erect a building and install 2500 spindles, so that it can manufacture its own yarns. Several houses will also be erected. Probably \$50,000 will be expended.

Jas. A. Benson of Washington, Ga., noted last week as proposing the establishment of a cotton mill, is desirous of obtaining complete information regarding the manufacture of cotton goods, especially that other than unbleached shirting and sheeting.

The Chamber of Commerce of Waycross, Ga., has obtained subscriptions amounting to \$23,000 towards the organization of a \$200,000 cotton-mill company. Local investors are to subscribe half of the required capital. Charles Schwing is furthering the project.

It is proposed to organize a \$125,000 stock company at Starkville, Miss., for the erection of a cotton mill to have 5000 spindles and manufacture cotton cloth. About \$60,000 have already been subscribed. Messrs. Arthur Whittam and W. B. Montgomery are interested.

The Celeste (Texas) Cotton Mills, previously reported, intends to install a 5000-spindle plant, not 3500, as was at first stated. The company is capitalized at \$60,000; J. T. Harrel, president; E. F. Adams, vice-president; R. D. Scales, secretary, and M. K. Harrel, treasurer.

G. E. Webb is interested in the movement, recently noted, to organize a \$100,000 cotton-mill company at Winston-Salem, N. C. It is proposed to have subscriptions to the stock payable in monthly instalments. This plan has been successfully followed by some successful Southern mills.

J. O. White of Gastonia, N. C., states that a part of the capital has been subscribed for the erection of the cotton factory proposed for location at Dallas, N. C. The contemplated plant, if built, will spin fine yarns on long-staple cotton, its spindles to number 6000. The capital will probably be \$100,000.

COTTONSEED OIL.

This department is open to the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Cottonseed at Memphis.

[Special Cor. Manufacturers' Record.]
Memphis, Tenn., April 15.

Quotations for cottonseed and cottonseed products, as officially posted on the Cotton Exchange today, were as follows: Cottonseed, bulk, rail or wagon, \$13 per ton; river, \$14; oil, in earload lots, per gallon, prime crude, 29½ cents; off crude, 28 cents; prime summer yellow, 32½ cents; meal, in 100-ton lots, per short ton, choice, nominal; prime, \$18.25 to \$18.50; off, \$16.75 to \$17.25; cake, in similar quantities, choice and off, nominal; prime, \$18.50 to \$18.75; linters, No. 1, nominal; No. 2, 2½ to 3½ cents per pound; No. 3, 2¼ to 2½ cents. Cake and meal are firm, with advancing tendency on the good demand from both the domestic and foreign trade. There is only a limited quantity of either offering. The demand for oil is fair, though, while holders are very firm in their views, bidders are displaying less willingness to follow the upward tendency. One large holder has said he would not turn loose his stock at less than 35 cents for prime crude. Offerings are small, though stocks are fairly large for the season.

Cottonseed-Oil Notes.

The fifth annual meeting of the Interstate Cottonseed Crushers' Association will be held in New Orleans, La., on May 14 and continue in session during a period of three days.

A contract was signed on the 12th inst. between the E. Van Winkle Gin and Machine Works of Atlanta, Ga., and the temporary board of directors of the Saluda Oil Mill Co. of Saluda, S. C., for a 16-plate 20-ton cottonseed-oil mill complete. The buildings will be erected by August 1, when the machinery will be placed and the mill ready for operation by October 1.

The business men of Luling, Texas, who have been considering the erection of another cottonseed-oil mill in Luling, met on the 12th inst. and accepted the proposition of the Luling Cotton Oil Co. to sell its stock and mill to the new concern. The new company will apply at once for a charter, with a capital stock of \$80,000. The following officers have been elected: H. B. Holmes, president; G. C. Walker, vice-president; J. K. Moore, secretary, and D. M. Day, treasurer.

Messrs. Stewart & Haas of Louisiana have made a contract with the American Machinery & Construction Co. of Vicksburg, Miss., for a complete delinting outfit, a duplicate of the Advance Gin & Milling Co., with a capacity of forty tons of cottonseed every twenty-four hours. The new plant will be located at Cheneyville, La., in Rapides parish, a point about twenty miles south of Alexandria, La. It is stated that there will be a number of other similar plants established in Louisiana and Mississippi that will handle at least 50,000 tons of cottonseed for European markets, going by New Orleans this season.

The following are the official quotations of cottonseed and cottonseed products as posted at the New Orleans Cotton Exchange on the 16th inst.: Prime refined oil, in barrels, 35 cents per gallon; off refined oil, in barrels, 34 cents per gallon; prime crude oil, loose, 30 cents per gallon; prime cottonseed cake, \$22.50 per ton of 2240 pounds; prime cottonseed

meal, \$22.50 per ton of 2240 pounds; soap stock, 1.07 cents per pound; linters, choice, $4\frac{1}{2}$ cents per pound; A, $3\frac{1}{2}$ cents; B, $3\frac{1}{4}$ cents; C, $3\frac{1}{4}$ cents; cottonseed in sacks delivered at New Orleans, \$14.50 per ton of 2000 pounds; in bulk, delivered at New Orleans, \$13.50 per ton of 2000 pounds.

The market for cottonseed products at Houston, Texas, is very steady, with stocks well held and generally well sold up. The season just closed has been a very active one with all the Houston mills. The four cotton-oil mills of Houston—the Consumers' Cotton Oil Co., the Houston Cotton Oil Co., the National Cotton Oil Co. and the Southern Oil Co.—consumed seed during the past season approximating 100,000 tons, which cost them an average of \$15 per ton. The treating of this seed resulted in the production, approximately, of 40,000 tons of meal, 45,000 tons of hulls and 3,700,000 gallons of oil, besides a small proportion of linters. The quotations for all products range as follows: Prime crude oil, loose, 27 to 28 cents; prime summer yellow oil, 30 to 31 cents; linters, per pound, $2\frac{1}{4}$ to $2\frac{1}{2}$ cents; hulls, baled, per ton, \$3.50, all f. o. b. mill at interior points in the State; cottonseed cake and meal, \$19.50 to \$20 per ton delivered at Galveston.

Large Oil Carrier.

It is reported that the Standard Oil Co. has made a contract for a tank steamship which will have a carrying capacity of about 3,300,000 gallons of oil and will be used in the North Atlantic trade. She will be the largest oil-carrying vessel in the world, and is to be constructed abroad.

J. D. Moore of Gastonia, N. C., states that the Lenoir Cotton Mills of Lenoir, N. C., which he is treasurer of and organized recently, as reported, will erect a building, one and two stories high, 75x275 feet, in which to place 6000 spindles. The company will manufacture single and two-ply warps and skeins 40s to 60s, using only long-staple cotton. The company's capitalization is \$75,000.

The stockholders of the Tifton (Ga.) Knitting Mills, previously reported, met during the week and organized by electing H. Kent, president, and W. W. Banks, secretary-treasurer. The directors are Messrs. Kent and Banks, H. H. Tift, L. G. Maynard and C. J. Austin. The plant is under construction. It has twenty-five machines, capitalized at \$10,000.

The Arkansas Woolen Mills of Nashville, Ark., has been incorporated, with capital stock of \$25,000, of which \$10,000 has been subscribed, the purpose being the erection of a woolen mill. I. Lowenberg is president; H. M. Baker, vice-president; J. J. Gebhardt, secretary-treasurer; L. J. Baker, C. V. Lowenberg and Elizabeth Terry, guardians.

Among the shipments of lumber from Jacksonville, Fla., last week the following vessels were reported: Schooner A. B. Sherman for Philadelphia with 540,870 feet; schooner Nellie T. Morse with 350,000 feet; and schooner Collins W. Waltin with 354,000 feet, both for New York; schooner Leonard Parker for Puerto Platte, San Domingo, with 200,000 feet, and schooner Adeline for Hamilton, Bermuda, with 161,000 feet. The Clyde Line steamers all cleared with full cargoes. The Carib took 300,000 feet of lumber, 2000 bundles of shingles and other cargo for Boston. The Comanche cleared with 275,000 feet of lumber, 9000 bundles of shingles and other cargo for New York.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record, Baltimore, April 17.

During the week under review the local lumber trade has undergone no material change, and in almost every channel of the industry there is a fair volume of business reported. The movement, however, is not up to that of former seasons, a number of conditions surrounding the market having a tendency to restrict operations. In several lines of trade considerable lumber is moving, notably in North Carolina pine, in which the situation is reported satisfactory. Stocks of North Carolina pine show no accumulation, and the better grades, which are in some instances reported light, are in good demand, with values firm and unchanged. In air-dried lumber there is an improvement and the outlook more encouraging. Dressed North Carolina pine stocks are in good request, with values very steady. In white pine the tone is quiet, with a steady demand, light in volume, with prices firm for desirable lots. There is some inquiry for cypress, with prices showing up better, and stocks ample for the demand. Hardwoods continue to attract attention, and the movement during the past week has been of a more active character. Oak and ash are in good demand from woodworking concerns, and prices firm. Poplar continues to occupy a prominent position, and there is a good inquiry for all grades. Stocks of dry stuff at mills are in good demand, with values firm. The foreign export trade in hardwoods has been simply overdone, and stocks have been rushed to foreign markets regardless of conditions abroad. At this writing the hardwood trade in London is reported very quiet, with stocks excessive and prices easier. Local exporters find no incentive to operate at present on an extensive scale.

Norfolk.

[From our own Correspondent.] Norfolk, Va., April 15.

Lumbermen in this section have been generally favored so far this week with more than an average trade, and the lumber market as a whole is in good shape. In the North Carolina pine industry everything is moving along with increased activity as the season progresses, and the tone of the market is decidedly firm. Stocks at all mills in Virginia and Eastern Carolina are by no means large, but in some cases there is a decided scarcity of certain grades. Nos. 1 and 2 have been in active demand for some time past, and at the moment stocks of these grades at all the mills are very scarce. No. 3 and all box grades are now moving freely, while values have hardened under the activity in demand. The demand from out of town has been better than usual during the past week, and stocks at the various points of distribution are being replenished. From Northern and Eastern sources numerous inquiries are coming to hand, and it is expected that during the month of May large orders from these sources will be received. The foreign inquiry is good, and some very large orders are now on file for shipment during the next sixty days. In a local way there is a large supply of lumber going into consumption for building purposes and for suburban improvements. Planing mills here are all running on full time, and some are far behind in their orders. The movement in hardwoods is

fair, and shippers are all generally busy. The freight market continues steady, with rates on lumber unchanged. Recent charters are as follows: Schooner Helen Hasbrook, 260 tons, James river to Elizabethport with oak switch ties at \$4; schooner Emily H. Naylor, 266 tons, Norfolk to New York with lumber at \$2.30; schooner N. H. Burrow, Suffolk to New York with lumber at \$2.30 and towage; schooner E. C. Middleton, City Point to New York at \$2.50, and schooner Bessie Brown, Norfolk to New York with dry boards at \$2.25.

Savannah.

[From our own Correspondent.] Savannah, Ga., April 15.

The situation in all sections of Southern Georgia with regard to the lumber industry shows a steady trade in progress, and at all milling sections there is considerable activity among mills. At the monthly meeting of the Georgia Saw-Mill Association last week at Valdosta the situation was reported unchanged. The demand from car companies is quite pronounced, and dressed stock is selling freely at good prices. The Georgia mills represented in the association are not making concessions in prices in order to effect sales. Inquiries from Eastern sections for lumber are numerous, and it is stated that large quantities of lumber will be required for the building trade in the East during this year. The market on Saturday last closed steady at the following quotations: Sawn ties, \$8 per 1000 feet; hewn ties, 25 cents each; minimum easy-size yard stock, \$10 to \$10.50; car-sills, \$12; stock 14x16-inch, depending on length, \$13 to \$15; ship stock, \$16. During the past week over 2,500,000 feet of lumber left the port. At nearby ports business in all lines of the lumber market continues to improve. At Brunswick exporters have had so far this month a fair average volume of business, and manufacturers at St. Simon's and other ports are well supplied with orders. The first quarter of 1901 shows a good shipping record for Brunswick, and in both foreign and domestic trade shipments showed a marked increase. The coastwise shipments for three months ending March 31 amounted to 28,934,000 superficial feet of lumber, 2,540,000 shingles, 359,027 crossties and 227,000 laths. The foreign shipments were 16,496,000 superficial feet of lumber, 482,700 shingles and 54,179 crossties. At Darien the market was reported very steady, with a good domestic and foreign inquiry. Lumber freights continue steady and unchanged. It is stated that owners of several schooners have decided to put their vessels in the transatlantic lumber trade, and schooners Andrew Adams and Republic have been chartered to load at Fernandina for Antwerp. The Andrew Adams was chartered at 112; bark James A. Wright, Savannah to Philadelphia with lumber at \$4.25; schooner Edith Olcott, 1141 tons, Savannah to New York with ties at 13½ cents, and schooner W. H. Sumner, Savannah to New York with lumber at \$4.62½ and ties at 14½ cents.

Mobile.

[From our own Correspondent.] Mobile, Ala., April 15.

The movement of lumber from this and other Gulf ports is at the moment very satisfactory to exporters, and the general market for desirable lumber shows that prices for spot material are very steady, but for future delivery values are easier. Stocks are not accumulating to any extent, and mills in this section are all well supplied with orders. The Cuban and South American demand is fair, and some good shipments have been made to these points during the past week. As to

the timber market, the situation is in many respects improved. Shipments coastwise to go forward and values are steadier, but the future course of the market will be entirely regulated by the tone of trade at European ports. Mills at Pearlinton and Moss Point all have orders to keep them employed for sixty to ninety days to come. Sawn timber when placed upon the market will bring 10 to 11½ cents per cubic foot, 40-foot basis. There is a fair demand for pine saw logs at \$5 to \$8 per 1000 cubic feet, according to average and quality. Cypress logs are selling at 8 to 12½ cents per cubic foot; poplar logs, \$6 to \$8 per 1000 feet, and oak logs, \$8 to \$12 per 1000 feet. Cottonwood logs are in demand at \$4 to \$5 per 1000 feet. Hewn timber is steady at 13 to 14 cents per cubic foot. Hewn oak is in limited demand at 15 to 18 cents per cubic foot, and hewn poplar at 13 to 13½ cents per cubic foot. During the past week the following shipments were reported: Bark Vannadis for London, 28,076 cubic feet of sawn timber, 20,027 cubic feet of hewn and 108,208 feet of lumber; bark Barford for the Tyne, 4280 cubic feet of hewn timber, 58,898 cubic feet of sawn and 19,140 feet of lumber; steamer Framfield for Rotterdam, 1,232,124 feet of lumber and 27,000 cubic feet of sawn timber; steamer Dulcie for West Hartlepool, 113,451 cubic feet of sawn timber, 6526 cubic feet of hewn and 25,898 feet of lumber; bark Skoda for Buenos Ayres, 579,608 feet of lumber; steamer Schlesing for a Cuban port, 154,391 feet of lumber; schooner Phinney for Havana, 331,661 feet, and steamer Banan for Cuban ports, 14,718 feet. The barkentine Stranger cleared for Buenos Ayres with 501,296 feet. The total shipments for the week aggregated 3,312,190 feet of lumber, 30,838 cubic feet of hewn timber and 227,425 cubic feet of sawn timber, all reduced to superficial feet amounting to 6,420,000.

Memphis.

[From our own Correspondent.] Memphis, Tenn., April 15.

While there has been no particular rush among the lumbermen of the district during the week, there has been a continuation of the gradual expansion in the volume of business, which denotes that conditions are being restored to the normal for the early spring period. A good run of orders has come forward from the West, with cottonwood, cypress, poplar and oak enjoying the bulk of the business. In the domestic East and North seasonable weather conditions have prevailed, and with the revival of business in all building and manufacturing lines there has come forward a more satisfactory volume of business than for some time. Several of the leading dealers have reported large shipments of quartered oak at satisfactory prices, quartered white being in best call. Poplar, too, has been freely bid for, as well as the plain oaks. The export division of the market is still reported as unsettled, though the week has witnessed a continuation of the improvement noted in former reviews. Bids have been on a more satisfactory basis for poplar, ash, sweet gum and the various oaks, with most interest in the latter manifested in quartered white. Plain red is in fair demand from the domestic trade, though the exporters are calling for this in only a modest way. Poplar and ash are in excellent request. The price situation has shown no material change, though values are firming up all around, with an advancing tendency in some lines, especially poplar and ash. Stocks on hand are fair in most of the leading woods, though poplar, ash and plain red oak are said to be more closely

sold down than heretofore. Some of the export firms here which have no milling plants of their own have bought freely of the first two of these woods. The millmen are taking away from their stocks about as rapidly as they are adding to them in all lines, while in some the sales are really larger than the daily output. Practically all the mills are running on full time. There has been a considerable increase in the supply of logs in sight, and most of the river mills report sufficient stocks to last them for several months. The rail mills are still a little shy on supplies, though the stronger ones are pretty well contracted ahead for timber. The general situation, while not so bright as was the case at this period last year, is regarded among the members of the lumber industry as a very healthful one, and few of the millmen express any anxiety as to the late spring or early summer business. The local retail lumber trade is exceptionally active. Building permits for the first two weeks of this month have aggregated in round numbers \$161,000, as against \$55,000 the corresponding period last year.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, April 13.

The demand for lumber is very fair. Stock of long leaf in the millmen's hands April 1 has just been made up and figures 141,000,000 feet. This is a trifle more than was anticipated, as it was thought the stock would run down to 135 to 137. However, the stock being decreased shows that the demand is yet greater than the mill cut. The tendency of the market is to maintain present values. The Texas list is firm at \$14.50 to \$15 on a 20-cent basis. There is every probability that this will be the market price for the next three months. If the crop developments are unusually early they may advance on the strength of such. The demand the past week has been principally from the Texas and Mexican dealers. The week's business was hardly as voluminous as last week. It is natural, however, to look for quietude in Texas trade just at this time. The city building trade in various portions of the State is quite brisk and furnishes sufficient business to make current orders satisfactory. The Western markets are quite active, and while the past week was an off week with Texas mills so far as Western business is concerned, there is no prospect of trade slackening up in that territory for some time. Several schedules for future shipment were offered local millmen, but in almost every case declined for lack of stock. The timber department is as brisk as it has ever been this year. Every mail brings to the millman specifications for the construction of a rice mill, warehouse or cotton mill. Quotations are made on the desirable inquiries, but they are all high relatively. The mills do not care particularly whether they secure the orders for this class of business or not.

Lumber Notes.

The Builders' Manufacturing Co.'s large planing and saw mills in the suburbs of Norfolk, Va., were completely wrecked by a terrific boiler explosion on the 10th instant.

Receipts of lumber at New Orleans for the week ending April 12 amounted to 2,743,000 feet, and for the season 85,599,320 feet, against 67,167,670 feet last season.

The Clarendon Stave Co. of Little Rock, Ark., has been incorporated, with a capital stock of \$25,000. The officers of the company are G. C. Schuster, president; Henry Kopelman, vice-president,

and W. R. Schuster, secretary and treasurer.

The High Bridge Lumber Co. of High Bridge, Ky., is putting in a large saw-mill plant. A big planing mill will be erected and run in connection with the plant, which will have a capacity of 50,000 feet of lumber per day.

A fire at Love's Station on the Ohio River & Charleston Railway, a few miles south of Bristol, Tenn., destroyed oak, pine and other lumber valued at \$35,000, with \$15,000 insurance. The lumber was owned by Messrs. Martin, Boring & Dickey.

The Florida Hardwood Supply Plant Co. of Martin, Fla., has begun to cut off the timber from 600 acres in the sugar hammock owned by Colonel Martin. The timber, consisting of oak, ash, hickory and other hardwoods, is said to be among the finest in the South.

The shipments of lumber from the port of Mobile, Ala., last week amounted to 3,312,119 feet to Cuba, South America, United Kingdom and Continental ports. The shipments of sawn timber for the week amounted to 227,425 cubic feet, and of hewn timber 30,838 cubic feet.

The James Strong Lumber Co. of Bristol, Tenn., has been chartered, with a capital of \$300,000. Work has been commenced on its big plant, and will be rapidly pushed to completion. The directors are James Strong, B. L. Dulaney, Hal H. Haynes, Paul W. Frick and John H. Caldwell.

Receipts of logs at Nashville, Tenn., from the upper Cumberland river and tributaries have been very large during the past week, 150 rafts having reached that city during the week, valued at \$75,000 to \$100,000. Most of the logs received have been poplar, with a large proportion of oak and ash.

D. L. McMullen and J. H. Hanford of Evanston, Ill., representing Illinois capitalists, have purchased 8000 acres of timber and coal lands near Kingston, Tenn., from John M. Jones and others of Sweetwater and Lenoir county. The price was \$40,000 cash. The property will be developed and several lumber mills erected.

The lumber trade at Claremont, Va., has increased very materially this season. There is at present vessel tonnage at that point to carry out over 3,000,000 feet of lumber. The Southern Railway is handling immense quantities of lumber over its Claremont branch for shipment to New York, Philadelphia, Baltimore and other points.

The Macon Lumber Co. of Macon, Ga., has been chartered, with a capital stock of \$10,000, with privilege of increasing to \$50,000. The company will deal in timber lands and lumber, erect and operate saw-mills, locate lumber-yards and operate and sell real estate. The principal office will be in Macon. The incorporators are J. L. Turner, J. B. Jenison and H. B. Erninger.

The Drone Lumber Co. of Olean, N. Y., which owns large tracts of oak, poplar, ash and hemlock in Somerset county, Pennsylvania, and Garrett county, Maryland, is building a number of manufacturing plants at Unamis, a new town on the Casselman river. A board mill and a stave and heading mill are already completed. A tub and pail factory and a wood-alcohol plant are in course of construction.

The saw-mill of the Ware Lumber Co., near Wayeross, Ga., has been purchased by the Noble & Gray Lumber Co., and the machinery will be moved at once to a point on the Savannah, Florida & Western Railway about half-way between Ho-

mersville and Dupont. The new company has a large tract of timber in that section, enough to supply its mill for several years. The company will be ready to operate in about a month.

It is stated that Hubbard Bros. of Mobile, Ala., some days ago closed a deal for a large section of fine timber lands in Florida. The new purchase of the company consists of 80,000 acres, and adjoins a tract of 50,000 acres already owned by it. The entire tract now consists of 130,000 acres situated in Washington county, Florida. The timber purchased is said to be a virgin forest, finely watered by running streams, and a very valuable property.

The Whiting Lumber Co. of Elizabethton, Tenn., has purchased from the Watauga Land Co. of that place a tract of timber land containing about 7000 acres situated in the northeastern part of Carter county, Tennessee. The Whiting Lumber Co. has commenced to build a tramroad leading from the above timber tract to the Virginia & Southwestern Railway, a distance of four miles. It is estimated that sufficient timber will come off this tract to keep the company's mills busy for four years.

The annual meeting of the North Carolina Furniture Manufacturers' Association was held at High Point on the 9th inst. Two important committees were appointed—on railroad rates, W. G. Bradshaw chairman; Chas. Ragan and A. E. Pate; on commercial ratings of buyers, W. G. Bradshaw, M. Murchison and W. T. Parker. Officers elected for the ensuing year are J. N. Mendenhall, president, Lexington; John Borden, vice-president, Goldsboro; A. E. Tate, second vice-president, High Point; J. S. White, secretary, Mebane.

The famous Okefenokee swamp in South Georgia has been sold to Charles Hebard & Sons of Michigan. The consideration, it is understood, is \$175,000, the first payment of \$87,500 having been paid last week. The swamp contains 354,000 acres and its circumference is 137 miles. The sale carries with it the land, timber, watercourses and game with which the swamp abounds. The swamp, it is said, was purchased for its standing timber, and after it is cleared the land will be devoted to the cultivation of sugarcane and cotton. Hebard & Sons are extensive mill-owners, and once the work of developing the marshes is begun, it will be pushed until traffic facilities, in the way of railroads and waterways, are constructed for the transportation of the products taken from the swamp.

The fifteenth annual convention of the lumbermen of Texas, Arkansas, Louisiana, Oklahoma and Indian Territories opened at Dallas on the 9th inst. President E. H. Lingo of Denison, Texas, called the meeting to order. The annual reports of President Lingo and Secretary Drake were read and adopted. At the second day's session the various committees submitted their reports to the convention, and most of the time of the two sessions of the day was devoted to their consideration. Both the products and the shipments of Texas mills were larger than those of any other State, Arkansas being its nearest competitor. The value of Texas shipments of lumber alone approximated close to \$7,000,000. The convention closed its deliberations on the third day with the election of the following officers: President, E. H. Lingo of Denison, Texas; vice-president, George W. Owens of Oak Cliff, Texas; secretary and treasurer, Carl F. Drake of Austin, Texas. The convention adjourned to meet in Houston, Texas, April 9, 1902.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,

Baltimore, April 17.

As in other fertilizer ingredients, the market for phosphate rock shows a quiet tone, and the volume of trade light. Sales of Tennessee rock are reported, and also a small lot of Florida, but with these exceptions the dealings have been light. Reports from some points of production in the Southern phosphate field are not encouraging, and in South Carolina the market is very quiet, with very little mining being done and no foreign demand for rock. Prices at Charleston are nominal. In Florida shipments for the ports are light, and the foreign demand shows no improvement. The Peace River Phosphate Mining Co. has closed down for the present until business revives, while a number of companies are curtailing their output. In Tennessee the market has undergone no change, and phosphate rock is firmly held at Mount Pleasant. There is some domestic demand, and also some foreign inquiry, but shipments so far this month have been light. The following phosphate charters were reported last week: Schooner J. R. Teel, Norfolk to Barren Island; schooner Marie Palmer, Charlotte Harbor to Baltimore, and British steamer Benwick, 1815 tons, from Savannah, Ga., to Harburg, all on private terms.

Fertilizer Ingredients.

The market for ammoniates is quiet and nominally steady, with very little inquiry at the moment. Southern buyers are not in the market, as their season is over, but later on are expected to purchase freely. Eastern buyers show no disposition to add to their supplies. The market in the West is very steady, with stocks accumulating to some extent, and holders disposed to ask outside figures.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)....	\$2 67½ @ 2 70
Nitrate of soda, spot Balto....	2 00 @ 2 10
N. York.....	1 85 @ —
Blood	2 42½ @ 2 45
Azotine (beef).....	2 47½ @ 2 50
Azotine (pork).....	2 47½ @ 2 50
Tankage (concentrated).....	2 37½ @ —
Tankage (9 and 20).....	2 40 & 10
Tankage (7 and 30).....	21 00 @ 21 50
Fish (dry).....	27 50 @ 30 00

Phosphate and Fertilizer Notes.

The International Phosphate Co. of Mount Pleasant, Tenn., has begun mining again at the Solita mines.

It is rumored that the Swifts of Atlanta are about making arrangements to establish a new fertilizer factory at Chattanooga, Tenn.

The schooner Annie C. Grace cleared from Charleston, S. C., last week for Barren Island with 750 tons of phosphate rock, and the schooner Edgar C. Ross for Baltimore, Md., with 580 tons.

Mr. J. L. Alexander, who owns 200 acres of land near Prattville, Ala., has recently discovered beds of phosphate rock on his property which show signs of being of a high grade. He is having the specimens analyzed, and if it is found to be as rich as reported he will have the property developed at once.

It is stated that the Tennessee Phosphate Co. of Mount Pleasant, Tenn., is arranging to begin work on another large washer, which will have a capacity of 450 tons per day, or about three times the capacity of the one now in operation. The company will also build another large crushing and drying plant in the near future.

If you wish to keep posted on the progress of the South, read the *Manufacturers' Record*. Price \$4 a year.

MECHANICAL.

Electrically-Driven Bending Rolls.

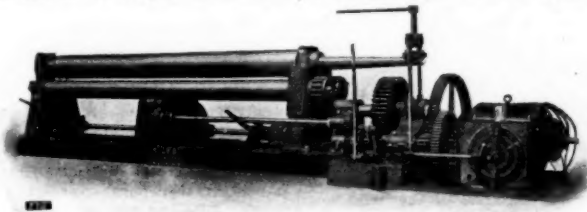
The rolls illustrated are solid wrought-iron forgings arranged in pyramid form, and have a capacity for bending plates up to twelve inches in width and five-eighths of an inch thick.

The lower rolls are geared together, while the upper or bending roll is revolved by the friction of the plate in passing through. It is adjustable by power to suit the thickness of the plate and the radius to which it is to be bent. It has a hinged bearing at one end, which may be turned down out of the way, while the other end has a long shank extend-

than when produced by the ordinary method and one which requires no further insulation when placed in position on the core. The coils of armatures are held in position by wedges of hard, thoroughly-dried wood, driven into notches provided near the top of the slots.

The commutators are built from drop-forged bars of pure lake copper, with selected mica insulation. They possess great durability and have an exceptionally even-wearing surface for the brushes.

The brush-holder is simple and highly efficient; it is of the reaction type. No adjustment of the brushes is necessary, and when they are once set the motor will operate in either direction without sparking and under all variations of load.



ELECTRICALLY-DRIVEN BENDING ROLLS.

ing to a third support, which retains the roll in position for the removal of rings or flues. This will be found a great advantage in boiler and other shops where plates are to be bent to a complete circle.

Midway between the housings a set of supporting rollers are placed to give additional stiffness to the lower rolls.

For very long machines additional sets of rollers are added.

The machine is firmly tied together by a heavy cast-iron sole-plate. It is strongly geared and all parts are stiff and substantial.

Suitable levers and clutches are conveniently placed for quick and easy control of all operations.

The machine is driven by an 18-horse-power reversible, constant-speed Bullock motor. For controlling, an automatic rheostat is used to prevent the operator from throwing on the full current too quickly and burning out the motor.

The field consists of a circular yoke of special steel. Particular attention has been given to a reduction in weight, but not at a sacrifice of efficiency.

The pole pieces, built up from soft sheet steel of the highest magnetic quality, are securely bolted to the yoke. The shape of the punchings are such as to produce a saturated pole face, and this feature, coupled with carefully-proportioned windings, is largely responsible for the sparkless operation of the motor, and is a feature greatly appreciated by engineers.

The field coils are machine-wound and carefully insulated. The shunt and series coils of compound-wound machines are separately wound. The coils are slipped over the pole before it is bolted to the yoke, and, should it be necessary, are readily removed.

The armature core is built up from thin, carefully-annealed sheet steel, possessing a high magnetic permeability. These discs are again annealed and then japanned. They are mounted upon the shaft and held firmly together by malleable iron and plates.

The windings, which are let into slots provided in the periphery of the armature core, are made of either copper bars or wire, as best suits the requirements. The coils are machine-formed, and after being formed are thoroughly insulated with mica and other high-grade insulations. They are then baked in steam-heated forms while under pressure to remove all moisture and produce a perfect and very compact coil. The result is claimed to be a coil less liable to injury

For further information address the Bullock Electric Manufacturing Co., Cincinnati, Ohio.

Gardner Governor Works.

We present a half-tone bird's-eye view of the new plant erected by the Gardner Governor Co., Quincy, Ill., for the manufacture of its celebrated governors, steam pumps and air compressors. The previous quarters of the company have been entirely inadequate for its constantly increasing business, and the crowded condition rendered necessary the enlarged facilities.

The plant consists of three buildings of substantial stone construction, built on the one-story plan, well lighted and with

equipped with the most modern devices known in good foundry practice. The front portion will be utilized for core-room, and the west section will contain cupola-room, cleaning-room and brass furnaces. Iron and coke will be elevated into the charging-room by an air lift.

The building on the extreme left is the pattern shop and storage building, its front half containing a complete outfit of machinery, while the rear half is used for pattern storage. These divisions are separated by a 24-inch stone wall extending five feet above the roof to insure fire protection. The power plant consists of a 200-horse-power water-tube Erie City boiler, a 14x18-inch Chandler & Taylor engine, Gardner pumps, Erie heaters and Austin separator. The entire plant is heated by the hot-blast system of the B. F. Sturtevant Company of Boston.

The electrical equipment was purchased from the Westinghouse Company, and is of the 220-volt system, used both for light and power. The pattern shop, foundry and part of the machinery is driven by slow-speed motors. A narrow-gauge industrial railway runs through all parts of the buildings, facilitating the handling of material.

Offices and draughting-rooms occupy the entire front portion of the main building in the second story, 120x30. Their appointments are in keeping with the remainder of the plant.

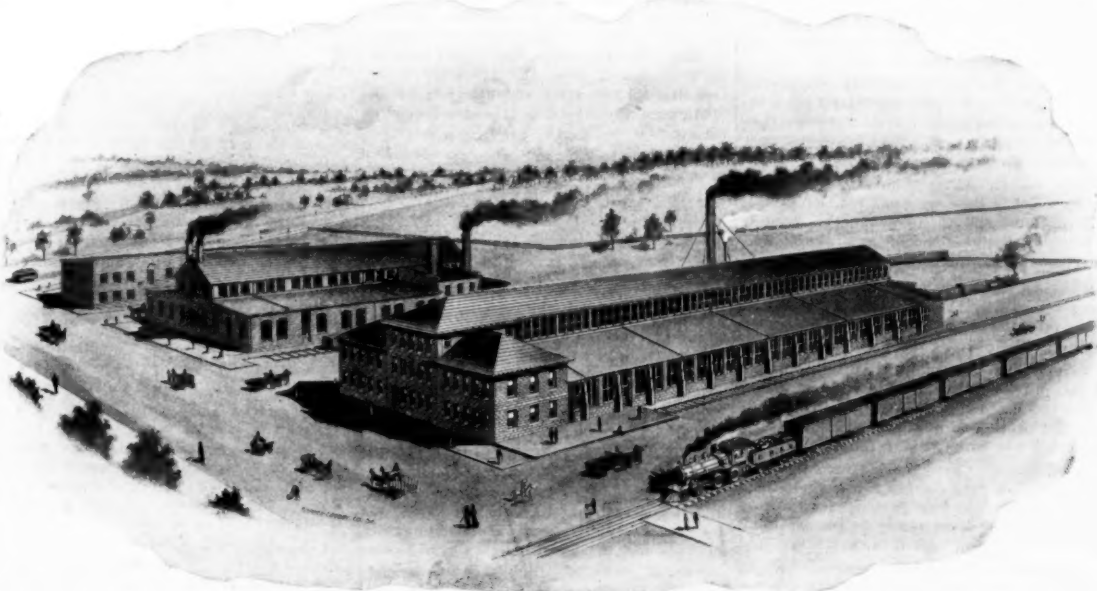
The plant is located on the main lines of the Wabash and Burlington systems, and three spurs run on the premises and into the buildings. This gives adequate railroad facilities to insure the prompt handling of all freight. All buildings are equipped with automatic fire sprinklers, with two sources of supply—the city water mains, with pressure of ninety pounds, and a tower eighty feet in height.

Buildings and grounds present a 400-foot frontage, and there is ample yard room for storage and expansion. Electric

another. In mining operations, vessel-loading and in industries of various kinds, apparatus can be seen in use today by which power controlled by one or two men does the work of hundreds.

It is interesting to note the important part played by wire rope or cable in such equipment. Really, it is indispensable, and so extensive has become its use that no one can tell how many thousands of miles are actually being employed in lifting heavy weights in the operation of inclined railways, in marine construction, in what is termed power transmission, and even in the construction of bridges. A series of photographs have recently been published in the catalogue of the Hazard Manufacturing Co. of Wilkesbarre, Pa., which give some idea of the great variety of its uses. Glancing at the illustrations one sees 100 tons in weight being lifted at the Newport News Ship-Yard by the electrical crane. Near it are views of one of the largest coal mines in Pennsylvania, where the cable is utilized in a variety of forms. Mammoth sailing vessels are shown, as well as the famous cup defender, having wire rope as rigging. The catalogue gives an excellent idea of the many varieties which are made by the Hazard Company. They include what is known as the standard hoisting rope, composed of six strands, each containing nineteen wires, for special use in mines and quarries. Another grade is elevator rope. This is made of the purest Swedes iron, and is thoroughly tested in order that no chances may be taken, for defective material has caused many an elevator accident and the loss of human life.

Had wire rope never been conceived the many suspension bridges now in use would have lacked an essential feature in their construction. The Hazard Company makes a specialty of constructing the necessary material for such bridges, as well as systems for aerial tramways,



GARDNER GOVERNOR WORKS.

all conveniences incident to an up-to-date manufacturing establishment. The main building is 300 feet long by 120 wide, and will contain the machine shop, erecting-room and offices. There is a 40x40 addition to this building for boiler-room. This large building is equipped with a traveling crane of large capacity for the convenient and rapid movement of heavy materials, etc. The building is magnificently lighted, the windows being of prism glass, throwing the light in diffused rays the entire length and breadth of the shops. The center building is the foundry, and measures 150x100 feet. It will also be provided with large traveling crane and

cars run to the very doors, making the plant accessible for all connected with it. The reputation gained by the company for making high-class goods will certainly be maintained in the new works. The company will be able to turn out a much larger quantity, and, with improved facilities, of better quality than ever before.

An Indispensable Product.

Fifty years have seen wonderful changes in the application of power for various purposes. Labor-saving inventions have really attained a marvelous development, especially in apparatus for lifting and transferring material from one point to

for carrying articles across valleys and rivers, also for rigging purposes.

As already noted, wire rigging is used largely in modern marine construction. It is interesting to note that the famous Defender of 1895 was equipped with wire rigging, and as the company is also furnishing the same material for the Defender in the coming international race, it is perhaps as high a tribute to the character of this product as could be given.

The catalogue referred to, as well as the little pamphlet relative to the electrical work manufactured by this company, will be found of interest by all users of wire in any form.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Allsop—Paint Ore.—T. E. Hendricks has discovered and is developing paint ore on his property near Allsop.

Anniston—Car-truck Plant.—It is reported that the Southern Car & Foundry Co., J. M. Elliott, president, will install machinery for the manufacture of trucks with channel irons.

Bay Minette—Land Company.—The Hand Land Co. has been incorporated, with capital stock of \$100,000, to conduct a general real estate business and for constructing and developing manufacturing enterprises.

Bessemer—Electric-light Plant.—The city will vote April 23 on the issuance of bonds for a municipal electric plant. Address "The Mayor."

Birmingham—Cotton Mill.—The Avondale Mills, previously reported to enlarge, states that the contemplated addition to its mill has not been definitely decided on, and will probably not be until May 1.

Birmingham—Coal Mines.—The Tutwiler Coal, Coke & Iron Co. has increased its capital stock, as recently reported, and is preparing to open large mines on the new line of the Ensley Southern Railway.

Prattville—Phosphate Deposits.—J. L. Alexander has discovered and will develop phosphate deposits on his property.

Stevenson—Cotton Mill.—S. S. Broadus and others will build a cotton mill.

ARKANSAS.

Berryville—Milling.—Chartered: The Berryville Milling Co., with capital stock of \$35,000, by J. W. Freeman, president; J. Jackson, W. D. Wilton, J. A. Bobo and others.

Clarendon—Stave Factory.—The Clarendon Stave Co. has been incorporated, with capital stock of \$25,000, and George S. Schussler, president; Henry Kopelman, vice-president, and W. R. Schussler, secretary and treasurer.

Clarendon—Hay-press Factory.—The Clarendon Hay Press & Manufacturing Co. has been incorporated, with capital stock of \$10,000, for the manufacture of a patent hay press. J. S. Thomas is president; Parker E. Irwin, Jr., vice-president, and W. L. Jeffries, secretary and treasurer.

Little Rock—Chair Factory.—The Ong

Chair Co. has been incorporated, with capital stock of \$5000, by J. C. Ong, president and treasurer, and Damon Clarke, secretary.

Nashville—Woolen Mill.—The Arkansas Woolen Mills has been chartered, with capital stock of \$25,000, for the manufacture of cotton and woolen goods, etc., by I. Lowenburg, president; H. M. Baker, vice-president, and J. J. Gebheart, secretary and treasurer.

Osceola—Building Company.—Chartered: The Osceola Mercantile Club Building Co., with capital stock of \$10,000, by F. B. Hale, president; W. H. Pullen, vice-president, and Will J. Driver, secretary and treasurer.

Smithdale—Timberland Development.—The Gifford-Frisbee Lumber Co. has recently purchased 12,000 acres of timber lands; has one mill in operation and is about to erect another band mill.

FLORIDA.

Albion—Saw-mill.—Phillips & McEachin will erect a saw-mill at Albion (not Bronson, as recently reported); capacity will be 40,000 feet per day.*

Braidentown—Water-works.—A. F. Wyman contemplates constructing a small-size water plant.*

Gainesville—Telephone System.—Perry M. Colson will organize a stock company to build a telephone line from Gainesville to Montbrook, Cedar Keys and other points.

High Springs—Saw-mill.—L. C. Gracy will establish saw-mill, as recently reported.*

Ocala—Sugar Mill.—Charles H. Campbell contemplates the organization of a \$10,000 stock company for the erection of a sugar mill.

Ocala—Sugar Refinery, etc.—C. W. Campbell, R. Bullock, E. E. Harris, S. T. Strunk, S. S. Savage and others have incorporated the Florida Sugar & Syrup Refining & Canning Co., with capital stock of \$10,000 and privilege of increasing to \$100,000, for the purpose of refining sugar, syrups, etc.

Zolfo—Saw-mill.—The Tampa Lumber Co. will rebuild its saw-mill, reported burned.

GEORGIA.

Atlanta—Timber Lands, etc.—It is reported that Charles Hebard & Sons of Michigan have purchased the Okefenokee swamp in South Georgia, containing 354,000 acres of land, and will clear the property of its standing timber, after which it will be devoted to the cultivation of sugar-cane and cotton.

Atlanta—Shoe Factory.—The establishment of a shoe factory is contemplated. John J. Coggins and Joseph F. Brown are interested.

Atlanta—Machine Works.—The E. Van Winkle Gin and Machine Works has built an addition to its machine shops, installed a new cupola in foundry and is installing new boilers to increase facilities.

Atlanta—Brick Plant.—The Oakwood Brick & Manufacturing Co.'s plant has been leased for twelve months under a guaranteed output of 3,000,000 brick; company will install a steam dry-killn. Address M. W. McRae, Equitable Building.

Ball Ground—Marble Mill.—The Atlanta Marble Co. has been organized by K. F. Gill and David W. Thomas of Baltimore, Md., and Jas. P. Harrison, Z. D. Harrison and W. B. Miles of Atlanta for the establishment of a marble mill at Ball Ground; main building will be 47x250 feet, in which will be installed twelve gangs of saws, six rubbing beds, planers, turners, finishing shop, etc.; machinery will be operated for the present with steam, but later on electric-power will be installed.

Boykin—Board Mill, etc.—The Babcock Bros. Lumber Co., reported recently as incorporated, has purchased 30,000 acres of timber lands in Miller county, and will erect a 75,000 feet capacity board mill.*

Cedartown—Furniture Factory, etc.—M. G. McDonald, Jas. H. Brett, J. C. Lewis and Luke McDonald have incorporated the McDonald-Brett Furniture Co., with capital stock of \$4000, and privilege of increasing to \$25,000, for the manufacture of furniture, etc.

Columbus—Cotton Mill.—The Muscogee Manufacturing Co. will erect a dye-house and increase capacity of its mill by the addition of 10,000 spindles.

Gainesville—Electric-power Plant, etc.—The Gainesville & Dahlonga Electric Railway Co., organized by H. H. Dean, Z. T. Castleberry, D. E. Evans, Howard Thompson and others for construction of an electric railway from Gainesville to Dahlonga, pro-

poses also to develop the water-power at the Chattahoochee river, put in an electric-lighting and power plant and possibly erect a summer hotel.

Griffin—Flour Mill.—Hon. Seaton Grantland, owner of the Flat shoals in Monroe county, will install a 40-barrel roller flour mill in connection with the grist mill now in operation.

Macon—Saw-mills, etc.—J. L. Turner, J. B. Jemison and H. B. Ernulger have incorporated the Macon Lumber Co., with capital stock of \$10,000, for the manufacture of lumber, erection of saw-mills, etc.

Macon—Cotton-oil Mill.—The Sterling Cotton Oil Co. has awarded contract for its proposed mill. It will be of eighty tons capacity, arranged for 120 tons.

Maysville—Oil Mill.—B. F. Carr and others will build an oil mill.

Rabun County—Mica Mine.—The Blue Ridge Mining Co. has been incorporated under Illinois laws, with capital stock of \$50,000, for working the Kell mica mines in Rabun county, Georgia; an entirely new plant will be installed and the work of development commenced at once. T. H. Beacon is president; A. L. Waterbury, vice-president; George W. Conover, secretary, and A. P. Woodruff, treasurer; principal office at 1511 Monadnock Block, Chicago.

Rome—Cotton Mill.—Plans have about matured for establishment of the proposed co-operative cotton mill; charter will be applied for, and the capital stock will be \$100,000.

Rome—Fruit Culture.—W. H. Gandy, W. H. Gandy, Jr., and Junius F. Hillyer have incorporated the Borden Fruit Co., with capital stock of \$15,000, for conducting a fruit-culture business.

Savannah—Storage Tanks.—The National Tank & Export Co., reported lately to erect several tanks for storage of turpentine, has been incorporated, with capital stock of \$25,000, by John R. Young, J. B. Chestnut, B. F. Bullard, J. A. G. Carson and others.*

Valdosta—Electric Plant.—Roberts, Cranford, Dasher & Co. have installed an electric motor for operating their harness factory.

Waycross—Cotton Mill.—Efforts are being made for the organization of a \$200,000 company for establishment of a cotton mill. Charles Schwing is interested.

KENTUCKY.

Catlettsburg—Coal Company.—The Summit Hill Coal Co. has been incorporated, with capital stock of \$10,000, by William E. Deegan, Charles Myers and others of Thurman, W. Va.

Danville—Sewerage.—J. B. Fisher, H. E. Woolfolk, C. W. Welsh and W. C. Dunlap have been appointed a committee to receive bids for construction of a sanitary sewerage system.*

Hickman—Woodenware Factory.—See item under Louisville, Ky.

High Bridge—Saw and Planing Mill.—The High Bridge Lumber Co. is erecting saw and planing mill with daily capacity of 50,000 feet.

Louisville—Stock-yards.—The Central Stock-Yards Co., with buildings now in course of construction, will apply for charter at Dover, Del. The capital stock will be \$500,000, and the yards will cost \$250,000. B. H. Hart is said to be interested.

Louisville—Woodenware Factory.—The Mengel Box Co. has purchased site for \$22,000 and will erect a three-story brick building, with basement, to cost \$100,000, for the manufacture of pails, measures and other round wooden packages. It is also said the company has arranged to establish a branch of its works at Hickman, Ky.

Louisville—Power-house Improvements.—The Louisville Railway Co. will make extensive improvements, including the enlargement of its power-house by the installation of a combined new engine and generator costing \$125,000.

Louisville—Ventilator Factory.—William Burns Wolfe of Washington, general manager of the Pullman Automatic Ventilator Co. of York, Pa., is investigating with a view of establishing a branch factory in Louisville.

Louisville—Cotton-picker Factory.—Rev. William H. Meyers of Sturgis, Ky., has recently patented a pneumatic cotton-picker, which he will manufacture in Louisville.

Maysville—Brick Works.—R. A. Masterson of Manchester is investigating with a view to establishing brick works in Maysville.

Nortonville—Power-house.—The Oak Hill Coal Co. will rebuild its \$5000 power-house reported burned.

Paducah—Knitting Mill.—R. B. Phillips and George C. Wallace have purchased a controlling interest in the Alden Knitting Mills, and will increase capital stock and enlarge the plant.

Somerset—Oil and Gas Company.—The Carpenter's Fork Oil & Gas Co. has been incorporated, with capital stock of \$25,000, by J. P. Hornaday and others; company owns large tracts of oil and gas territory in the Kentucky and Tennessee field and will develop its property.

LOUISIANA.

Cheneyville—Delinting Plant.—Stewart & Haas have contracted for a complete delinting outfit with capacity of forty tons every twenty-four hours.

Jennings—Machine Shops, etc.—The Louisiana Machine & Well Co. has been incorporated, with capital stock of \$25,000, to erect and operate machine shops and to sink wells for oil, water and minerals. Henry W. Lanz is president; J. F. Ritter, vice-president, and F. B. Caffall, secretary and treasurer.

Lake Charles—Irrigation Plant.—The Illinois Canal & Rice Co. has been incorporated, with capital stock of \$150,000, for the cultivation of several thousand acres of rice lands recently purchased on Bayou Lacasine. E. F. Rowson is president; George Conover, vice-president; John F. Miller, secretary and treasurer.

Lake Charles—Oil Company.—The Louisiana & Texas Oil Co. has been organized by A. L. Lyons of Westlake, La.; George W. House of Sulphur, Texas; W. B. Sharp of Dallas, Texas, and others.

Lake Charles—Oil Company.—The Lake Charles Oil Co. has been incorporated, with capital stock of \$25,000, by William Murray, H. J. Geary, J. Stewart Thomson, Frank Mace and others to develop oil, gas and mineral lands.

Louisiana—Cotton Mill.—F. A. Cumnock, superintendent Smithfield Cotton Mills, Smithfield, N. C., is endeavoring to organize a \$100,000 company for the establishment of a 5000-spindle and 300-loom cotton mill in Louisiana.

Loyd.—The Lunenburg plantation has been sold and will be operated by the Lunenburg Planting Co., Limited, incorporated with capital stock of \$52,000 by Jos. Fitzpatrick, Dr. E. L. Henry, M. R. Ernst and others.

New Orleans—Excelsior Factory.—The Keystone Agency Co., P. O. Box 967, contemplates installing an excelsior plant in connection with its moss factory.*

New Orleans—Cotton Mill.—The establishment of a cotton mill is contemplated; \$100,000 has been subscribed, but nothing definite will be done until \$150,000 more has been raised. For particulars address Sidney F. Story, vice-president Southern Industrial Association.

New Orleans—Distillery.—The Southern Redistilling & Rectifying Co. will enlarge its buildings and increase its capacity.

New Orleans—Brewery.—The Retail Dealers' Co-operative Brewing Co. will be organized, with capital stock of \$100,000, for establishment of a brewery. Address for particulars J. C. Suarez.

Shreveport—Ice Factory.—The Shreveport Ice & Refrigerating Co. will rebuild its ice plant, reported burned at a loss of \$50,000; plant will be rebuilt on a larger and more extensive scale.

MARYLAND.

Baltimore—Chair Factory.—Hechinger Bros. & Co. will rebuild at once their chair factory reported lately as burned at a loss of \$100,000.

Baltimore—Land Improvement.—The Oaklawn Land Improvement Co. has been incorporated by Theodore Mottu, James P. Healey, William L. Cooney, George M. Hay and others, with capital stock of \$25,000.

Baltimore—Adhesives Factory.—Chartered: The Wichter Manufacturing Co., for making adhesives, by Jacob W. Wichter, David A. Breckenridge of Washington, D. C.; Frank Von Wichter, John Stromer and John B. A. Whittle; capital stock \$100,000.

Baltimore—Telephone Companies.—George R. Webb, president of the Maryland Telephone Co., and others have completed plans for the consolidation of a number of telephone companies in Maryland and Pennsylv-

vanla, which will be operated under one corporation, to be known as the United Telegraph & Telephone Co. and have capital of \$1,000,000. Mr. Webb will probably be president of the new company, and among others interested with him are Alexander Brown, Henry A. Parr, Thomas J. Hayward, S. Davies Warfield and James Bond.

Baltimore—Drug Company.—The Read Drug & Chemical Co. has been incorporated, with capital stock of \$20,000, by Arthur Natans, James B. Moore and others.

Cumberland—Coal Mines.—The Consolidation Coal Co. has added improvements to its mines in the George's Creek region, which makes its capacity about 6000 tons per day; compressed air locomotives have been installed with such success that the company will extend the system to its other mines.

Garrett county—Lumber Mills, etc.—The Droney Lumber Co. of Olean, N. Y., which owns large tracts of timber lands in Somerset county, Pennsylvania, and Garrett county, Maryland, is erecting a number of manufacturing plants at Unamis, a new town on the Casselman river, and will erect 200 dwellings for operatives. Another company is also erecting at this point a spoke and handle factory.

Washington, D. C.—Bridge.—A committee has been appointed to select site and formulate plans and specifications for the new modern bridge across the Potomac to replace the present "Long Bridge." Address "District Commissioners."

Washington, D. C.—Cold-storage Plant.—The Washington Market Co. proposes a new issue of bonds for the purpose of enlarging its cold-storage plant and for other improvements.

MISSISSIPPI.

Bulah—Gin.—The Delta Gin Co., lately incorporated, will install a three-gin outfit of seventy saws and press, including 50-horsepower engine and 60-horsepower boiler; building will be 18x48; Clay Wilson, manager.

Corinth—Machine Shops.—The W. T. Adams Machine Co. has improved its plant by the installation of additional machinery, including a new pulley mill and special lathe, and will later on install an air compressor and other pneumatic machinery and enlarge its electric-light plant.

Corning—Mercantile.—Chartered: The Big Four Mercantile Co., with capital stock of \$20,000, by A. J. Whitehead (president) and others.

Ellisville—Foundry and Machine Shops.—The Miller Manufacturing Co. has been incorporated, with capital stock of \$20,000, to conduct foundry and machine shop, by Chas. J. Miller, George Miller, E. W. Freeman and others.

Gloster—Electric-light Plant and Water-works.—C. H. Jenks of St. Louis, Mo., will prepare preliminary plans and estimates for an electric-light plant and construction of a system of water-works.

Laurel—Wagon Factory.—The Lindsey wagon factory, reported recently as burned at Sandersville, and to be rebuilt at Laurel, has been incorporated as the Lindsey Wagon Co., with capital stock of \$50,000, by S. W. Lindsey, John Lindsey, J. E. Parker, F. W. Pettibone and others.

Laurel—Water-works.—The city will issue \$30,000 of bonds for construction of its proposed water-works, previously reported. Address "The Mayor."

Minter City—Cotton-oil Mill.—The Minter City Oil Works has been organized and incorporated, with capital stock of \$50,000, for establishing a 60-ton cottonseed-oil mill, by Chas. L. Wortham (who may be addressed) and others.

Port Gibson—Cotton Mill.—It is reported that a cotton mill will be established in the plant formerly operated by the Mississippi Cotton Oil Co. Names of those interested will be announced later.

Rosedale—Water-works.—The city will issue \$15,000 of bonds for construction of a system of water-works. Address "The Mayor."

Starkville—Cotton Mill.—It is proposed to organize a \$125,000 company for the erection of a 5000-spindle cotton mill. Arthur Whitam and W. B. Montgomery are interested.

Vicksburg—Cotton Compress.—The People's Compress Co. has contracted for a new and complete compress.

MISSOURI.

Joplin—Roofing and Manufacturing.—Chartered: The W. E. Morgan Roofing & Manufacturing Co., with capital stock of \$6000, by W. E. Morgan, W. R. Wallace and others.

Kansas City.—Chartered: The Midland Poultry Food Co., with capital stock of \$10,000, by Joseph D. Havens, Harry E. Moss, Thomas R. Morrow and others.

Kansas City—Electric Power-house.—The Metropolitan Street Railway Co. will build new power-house, to cost \$1,000,000, with capacity of 30,000 horse-power.

Kansas City—Gold Mining.—Chartered: The Fisher-Boorn Gold Mining Co., Limited, with capital stock of \$65,000, by John C. Millick, John T. Morgan, Addison Thompson and others.

Moberly—Drug Company.—The L. E. Frost Drug Co. has been incorporated, with capital stock of \$6000, by Frank A. Frost, L. E. Frost and others.

Purdin—Creamery.—Chartered: The Purdin Creamery Co., with capital stock of \$2050, by W. G. Beckett, H. H. Bivens and W. H. Reedy.

St. Louis—Forage Company.—The Missouri Forage Co. has been incorporated, with capital stock of \$11,500, by Francis Lee Robinson, John H. Evill, Christian Kenney and others.

St. Louis—Real Estate.—Chartered: The Capital Real Estate & Investment Co., with capital stock of \$2000, by Wm. J. Hueska, John Bull, Wm. M. Fairbault and others.

St. Louis—Brick Plant.—W. N. Matthews & Bros. contemplates establishing a plant for the manufacture of brick with annual capacity of from 4,000,000 to 12,000,000.

St. Louis—Contracting Company.—Chartered: The Wolchek Masonry & Contracting Co., with capital of \$2000, by August Wolchek and others.

St. Louis—Realty Company.—The Ninth Street Realty Co. has been chartered, with capital stock of \$50,000, by Valle Reyburn, J. B. Moberly and C. H. McMillan.

St. Louis—Realty Company.—The Twelfth Street Realty Co. has been incorporated, with capital stock of \$50,000, by Valle Reyburn, J. B. Moberly and C. H. McMillan.

Versailles—Telephone Company.—The Versailles Telephone Co. has been incorporated, with capital stock of \$5000, by William E. Straus, A. Popper and others.

NORTH CAROLINA.

Fayetteville—Cotton and Woolen Mill.—W. M. Morgan and associates will not build cotton and woolen mill at Fayetteville, as was recently reported.

Fayetteville—Building-material Factory.—Messrs. Boone & Thain, architects, have organized the Fayetteville Lumber Manufacturing Co. for the manufacture of all kinds of builders' material, including sash, doors, blinds, mantels, moldings, etc.

Fayetteville—Telephone Companies.—Franchises have been granted the Fayette Telephone Co. and the American Telephone & Telegraph Co. for construction of systems.

Goldsboro—Lumber Company.—The Goldsboro Lumber Co. will increase its capital stock from \$100,000 to \$300,000.

Henderson—Flour and Corn Mill.—A company has been formed, with capital stock of \$10,000, for establishment of a flour and corn mill with capacity of 100 barrels a day; power of the Parham-Finck cotton ginning plant will be used for operating the mill.

Henderson—Telephone Company.—The Henderson Telephone Co. will increase its capital stock to \$100,000 and enlarge its system.

Jefferson—Mining and Milling.—The Carolina Mining & Milling Co. has been incorporated by Chipman Botsford, Worth, W. Va.; Henry S. Brown, Bramwell, W. Va.; E. B. Woodyard, Welch, W. Va.; C. E. Jeck and C. L. Zoll of Jefferson; capital \$1,000,000.

Lexington—Woodworking Factory.—E. M. Ward, James F. Hedrick and L. F. Rothrock will erect a sash, door and blind factory.

Morganton—Wood-pulp Mill.—Thomas P. Moore is investigating with a view to establishing a plant for the manufacture of wood pulp, and desires correspondence.

Shelby—Knitting Mill.—C. M. and Orlanda Elam have organized the Lura Knitting Mill, with capital stock of \$10,000, for establishing a plant.

Statesville—Tobacco Factory.—B. H. Adams, T. E. Vinson and W. H. Charles have rented the building and machinery of the Iredell Tobacco Co., and will operate same in the manufacture of tobacco.

Statesville—Woodworking Factory.—Jake Stewart and Robert Sowers have established a factory for manufacture of mantels, brackets and other finishings for dwellings, etc.

Thomasville—Furniture Factory.—The Cramer Furniture Co. has built new factory, which will be in operation about May 1. Capacity will be 1200 chairs per day, arranged to double on short notice.

SOUTH CAROLINA.

Cope—Handkerchief Mill.—Henry F. Jennings is investigating with a view to establishing a handkerchief factory, and desires correspondence.

Georgetown—Furniture Factory.—The Georgetown Furniture Co. contemplates starting the manufacture of furniture, and desires correspondence.

Greenville—Shoe Factory.—Ludwig Markert of Edgefield county is investigating with a view to establishing a shoe factory in Greenville.

Mullins—Ginnery.—The W. H. Daniel Supply Co. will erect a ginnery, as recently reported, to be equipped with a modern ginning system, elevators, etc., and cost \$5000.

Oakley Depot—Brick Works.—The Carolina Brick Co. has been incorporated, with capital stock of \$30,000, for the manufacture of bricks, by Louis Dunneman, Peyre G. Hanahan and George H. Moffett, all of Charleston.

Rock Hill—Electric-light Plant, Water-works, etc.—The city will hold an election to decide the issuance of \$5,000 of bonds for purchasing the electric plant and water-works of the Rock Hill Water, Light & Power Co., and for constructing a system of sewerage. Address "The Mayor."

Saluda—Cotton-oil Mill.—The temporary directors of the Saluda Cotton Oil Co. (lately reported) have awarded contract for a 16-plate 20-ton cottonseed-oil mill.

Seneca—Iron Works.—Chartered: The Seneca Iron Works, with capital stock of \$5000, by W. O. Hamilton, president; W. S. Hunter, vice-president, and J. W. Stribling, secretary and treasurer.

TENNESSEE.

Bristol—Tannery.—Charles A. Schieren & Co. of Brooklyn, N. Y., proprietors of the Dixie Tannery at Bristol, will double capacity of plant and install machinery for the manufacture of leather belting.

Bristol—Woodworking Factory.—Gillett & Sons of Charlestown, Mass., will, it is reported, erect a building in Bristol and equip as a factory for the manufacture of spokes, hubs, shafts and other vehicle material.

Bristol—Saw and Planing Mill.—The James Strong Lumber Co., a full account of which has been published before, has applied for charter, with capital stock of \$300,000; company will also build large planing mill in connection with its saw-mill.

Bristol—Tobacco Factory.—The Reynolds Tobacco Co. has increased its capital stock and will enlarge its plant, as recently reported.

Brotherton—Locust-pin Factory.—The Tennessee Lumber Co. will establish a locust-pin factory.

Chattanooga—Saw-mills, etc.—A dispatch states that H. Clay Evans and associates have sold to the Southern Lumber & Land Improvement Co. of Peoria, Ill., and lately chartered, with capital stock of \$1,000,000, 1638 acres of land at Boyce Station, in East Chattanooga. It is said the company will erect saw-mills with daily capacity of 75,000 feet, brick-pressing plant, cotton mill and other industries.

Chattanooga—Bed-spring Factory.—The Wight Manufacturing Co. has been organized for the operation of the bed-spring factory reported last week to be erected by Walter B. and E. M. Wight.

Chattanooga—Cotton Mill.—D. J. Griffin, G. N. Henderson, M. M. Hedges, J. F. Casey and others will organize a company to erect a cotton-batting mill; capital all subscribed.

Clarksville—Mercantile.—Chartered: The J. P. Weaver Grocery Co., with capital stock of \$5000, by J. P. Weaver and others.

Cleveland—Cannery, Ice Factory, etc.—J. B. Fargis will erect an ice factory, cannery and bottling works.

Clifton—Electric-light Plant.—It is reported that Mr. Mansfield of Bellbuckle will establish an electric-light plant at Clifton.

Crossville—Coal Mines.—I. D. Merriam and J. H. Jarnagin of Chattanooga are interested in the formation of a company for developing 1000 acres of coal property which they own near Crossville.

Crossville—Coal Mines.—James B. Wilber of Chicago has, it is reported, purchased 8000 acres of coal land near Crossville, and will organize a stock company for developing it.

Elizabethton—Timber Land.—The Whiting Lumber Co. has purchased 7000 acres of timber land in Carter county.

Gallatin—Electric-light Plant.—The legislature has passed a bill authorizing the issuance of bonds for construction of an electric-light plant. Address "The Mayor."

Kingston—Timber-land Development.—D. L. McMullen and J. H. Hanford of Evanston,

Ill., representing Illinois capitalists, have purchased 8000 acres of timber and coal lands near Kingston from John M. Jones and others of Sweetwater, Tenn. The property will be developed and several mills erected.

Kingston—Telephone Company.—The Tennessee Telephone Co. has been incorporated, with capital stock of \$10,000, by H. M. Carr, George M. Chandler, S. C. Brown and others.

Knoxville—Marble Mill.—The Tennessee Producers' Marble Co. is enlarging its mill by erection of an addition 50x50 feet, in which will be installed a planer, two rub beds and three lathes.

Knoxville—Mercantile.—Chartered: Galyon, Farrell & Co., with capital stock of \$6000, by Thomas W. Galyon and others.

Livingston—Telephone Company.—The Overton Telephone Co. has reorganized and increased its capital stock from \$5000 to \$25,000, and will install an exchange and construct 300 miles of line.

Memphis—Brewery.—Joseph Schlitz of Milwaukee, Wis., is reported to erect a \$500,000 brewery in Memphis. Louis Leble of Chicago is said to be the architect engaged.

Memphis—The National Lap Link Co. has been organized for the manufacture of the Gatewood patent lap link. Thomas Wellford is president; James Applewhite, vice-president, and J. T. Wellford, secretary and treasurer.

Memphis—Screen-door Factory.—E. M. Kemp of the Wabash Screen Door Manufacturing Co. of Rhinelander, Wis., reported several months ago as investigating with a view of establishing a branch in Memphis, has purchased fifteen acres of land and will soon begin erection.

Mt. Pleasant—Crushing and Drying Plant, etc.—The Tennessee Phosphate Co. will erect another washer with capacity of 450 tons per day, and expects to build another crushing and drying plant.

Nashville—Fertilizer Factory.—The Empire Guano Co. has been chartered for the manufacture of fertilizers by A. C. Read, J. S. Campbell, John A. Bell, Hamilton Parks and others; capital stock \$100,000.

Nashville—Confectionery Company.—J. C. Goodrich, R. D. Harris, J. D. Kain and others have incorporated the American Confectionery Co. for the manufacture of candy, etc.; capital stock \$25,000.

Ozone—Coal Mines and Coke Ovens.—The Ozone Coal & Coke Co. has been incorporated (principal office at Nashville) for the development of 2000 acres of coal lands at Ozone, and expects to have an output of 1000 tons per day within twelve months; coke ovens will, it is said, be added to the other operations. W. E. Eastman, H. V. B. Smith and H. M. Hood are among the incorporators; authorized capital is \$10,000.

Sherman Heights—Broom Factory.—William Lockwood of Sherman Heights and S. B. Kennedy of Louisville, Ky., will organize a company for the establishment of a broom factory.

Sherman Heights—Pants and Shirt Factory.—Milton Lewis and J. C. Lamson will establish a pants and shirt factory.

Sherman Heights—Water-works.—Efforts will be made for the construction of a system of water-works to supply Sherman Heights and East Chattanooga. Correspondence solicited. Address J. M. Stephens at Sherman Heights.

Sweetwater—Knitting Mill.—The Mascot Knitting Mills, recently reported to increase capacity, states that it may move its mill to Dalton, Ga., and double capacity.

Tullahoma—Electric-light Plant.—The city will vote April 23 on the issuance of \$10,000 of bonds for erection of an electric-light plant. Address "The Mayor."

TEXAS.

Ash Creek (not a postoffice)—Cotton Gin.—The Ash Creek Gin Co. has been incorporated, with capital stock of \$6000, by W. J. Cline, J. E. Martin, G. M. Martin and others.

Beaumont—Oil Company.—The Grace Oil Co., with capital stock of \$150,000, of Beaumont, Texas, and Colorado Springs, Col., has been incorporated by H. L. Eaglin, D. A. Duncan, C. C. Roberts, all of Beaumont, and others.

Beaumont—Oil Company.—The Maskamp Oil & Gas Co. has been incorporated, with capital stock of \$150,000, by H. Masterson of Houston, R. S. Conn of Austin, S. H. Kempner, John Sealy and others.

Beaumont—Oil and Gas Company.—The Beaumont Petroleum & Gas Co. has been chartered, with capital stock of \$200,000, by Sam Park, George B. Gallon, Don D. Donohue, R. C. Duff and others.

Beaumont—Oil Wells.—Eastern capitalists represented by R. L. Henry of Chicago and

Charles D. Pullen of New York are reported as having purchased the property at Beaumont for \$1,250,000 of the Texas Western Oil Co., and as having organized the National Oil & Pipe Line Co., with capital stock of \$1,000,000, to develop.

Beaumont—Oil Company.—The Madeline Oil Co., with capital stock of \$150,000, has been chartered by T. B. Burbridge, James Allen of Colorado Springs, Colo.; J. D. Martin, W. L. Douglass and others.

Beaumont—Oil Company.—Chartered: The Chicago Crude Oil Co., with capital stock of \$500,000, by John B. Goodhue, W. I. Black and others.

Beaumont—Oil Company.—Chartered: The Cartwright Oil & Development Co., with capital stock of \$500,000, by Matthew Cartwright, M. C. Roberts of Terrell, Texas; George C. Greer, Robert Curley and others.

Beaumont—Oil Company.—The Citizens' Consolidated Oil Co. has been incorporated, with capital stock of \$5,000,000, by W. B. Dunlap, W. R. Blain, O. B. Greeves and others.

Beaumont—Oil Company.—The Drillers' Oil Co. has been incorporated, with capital stock of \$500,000, by Rufus Hardy of Corsicana, W. B. Sharp and Ed Prather of Dallas, and A. M. Carter of Fort Worth.

Beaumont—Oil Company.—The Heywood Oil Co., with capital stock of \$300,000, has been chartered by Dewey Heywood, W. S. Davidson and others.

Beaumont—Oil Company.—Chartered: The Victor Oil Co., with capital stock of \$250,000, by M. Marx, R. S. Rowland, Walter C. Jones and others, all of Galveston.

Beaumont—Oil Company.—Chartered: The Beaumont National Oil Co., with capital stock of \$100,000, by L. Norvell, E. A. Dickinson and J. F. Lamer.

Beaumont—Oil Company.—The Gober Oil Co., with capital stock of \$500,000, has been incorporated by J. D. Gober, J. M. Gober and others.

Beaumont—Oil Company.—The Spindletop Oil Co. has increased its capital stock from \$300,000 to \$600,000.

Beaumont—Oil Company.—Chartered: The Merchants' Oil Co., with capital stock of \$500,000, by W. H. Aldridge, H. A. Perlestein, William Wilms and others.

Beaumont—Oil Company.—Chartered: The Alamo Oil Co., with capital stock of \$50,000, by Martin Weiss of San Marcos, S. Fremberg, B. Denster and B. Weiss of Beaumont.

Beaumont—Oil Company.—The Jefferson County Oil Co. has been incorporated, with capital stock of \$100,000, by M. A. Shumard of Dallas, H. M. Stringfellow of Lampasas, W. C. Averill of Beaumont and others.

Beaumont—Oil Company.—Chartered: The Continental Oil Co., with capital stock of \$100,000, by J. N. Tabler of Royce City, M. B. Yates, M. A. Shumard of Dallas, W. C. Averill of Beaumont and others.

Beaumont—Oil Company.—The Southern Pacific Oil Co. has been incorporated, with capital stock of \$100,000, by J. T. Duncan of La Grange, C. D. Goldthwaite of Cameron, H. T. Stalt of Waco and others.

Beaumont—Oil Company.—The Central Texas Oil Co., with capital stock of \$300,000, has been chartered by H. T. Stalt of Waco, J. H. Thompson of Bellville, J. T. Duncan of La Grange and others.

Beaumont—Oil Company.—Chartered: The Pear Orchard Oil Co., with capital stock of \$125,000, by A. J. Eilers, John W. Maddox and L. Davis, all of Austin.

Beaumont—Oil Company.—Chartered: The Phoenix Oil Co., with capital stock of \$100,000, by Nathan Davis of Taylor, M. Hecht of Beaumont, D. F. Carden of Dallas and others.

Beaumont—Oil Company.—The Beaumont & Dallas Oil Co. of Beaumont and Dallas has been incorporated, with capital stock of \$300,000, by J. B. Harris, W. B. Sharp and W. W. Prather.

Beaumont—Oil Company.—The Acme Oil Co., with capital stock of \$100,000, has been chartered by A. J. Eilers, Nelson Davis, W. H. Thaxton and others, all of Austin.

Beaumont—Oil Company.—The Queen City Oil Co., with capital stock of \$200,000, has been incorporated by G. W. Collier, W. H. Turner and W. E. Brice.

Belton—Oil Company.—The Bell Oil Co. has been incorporated, with capital stock of \$100,000, by J. F. James, president; T. W. Cochran, vice-president, and W. S. Hunter, secretary and treasurer.

Boyce—Gin.—The Boyce Gin Co., Limited, has been incorporated, with capital stock of \$8000, by J. H. Couch, T. J. Bates, B. M. Carter and others.

Cameron—Oil Company.—The Cameron &

Brazos Valley Oil Co. has been incorporated, with capital stock of \$10,000, by R. H. Hicks of Rockdale, John M. Hedley, R. F. Pool and others.

Celeste—Cotton Mill.—The Celeste Cotton Mill, lately reported incorporated, will build a 5000-spindle mill. Address for particulars J. T. Harrell, president.

Corsicana—Oil Refinery.—The Independent Oil Co., recently chartered by W. G. Baker and others, will erect a \$50,000 refinery with capacity sufficient to handle 100 barrels of the crude oil per day, the output being lubricating oil.

El Paso—Hotel Company.—Chartered: The Bailey Hotel Co., with capital stock of \$25,000, by C. E. Bailey and others.

Enloe—Oil and Cotton Company.—The Enloe Oil & Cotton Co. has been incorporated, with capital stock of \$50,000, by T. J. Record, J. J. Culbertson, W. S. Moore and others.

Ferris—Brick Works.—The Ferris Press Brick Co., lately reported incorporated, will establish works of 40,000 per day capacity. Address T. G. Cole.*

Fort Worth—Oil Company.—The Fort Worth Oil Co. has been incorporated, with capital stock of \$50,000, by W. G. Turner, F. D. Thompson, Bacon Saunders and others.

Fort Worth—Oil Company.—Chartered: The Pittsburg Oil Co., with capital stock of \$450,000, by J. T. Bond of Beaumont, A. L. Matlock of Fort Worth and others.

Fort Worth—Oil Company.—The Slaughter-Masterson Oil Co. has been incorporated, with capital stock of \$500,000, by S. B. Burnett, M. B. Loyd, Winfield Scott and others.

Fulda—Telephone Company.—The Bellah Telephone Co. has been incorporated, with capital stock of \$2100, by Sam Bellah, Sidney Webb and W. E. Kaufman.

Galveston—Oil Company.—The Zenith Oil Co. has been incorporated, with capital stock of \$300,000, by C. C. Burrell, Fred W. Fickett, I. M. Cline and others.

Galveston—Oil and Gas Company.—Chartered: The Caronkaway Oil & Gas Co., with capital stock of \$200,000, by J. H. Steele, O. S. Flint and George Anderson.

Galveston—Oil Company.—Chartered: The Crystal Oil Co., with capital stock of \$100,000, by David Russell of Colmesneil, O. S. Cummings of Alvin, Frank H. Miller of Galveston and others.

Galveston—Land and Oil Company.—The High Island Land & Oil Co., with capital stock of \$250,000, has been incorporated by A. Bornefeld, M. L. Moody, Jr., M. A. Davey, Charles Fowler and others.

Galveston—Oil Stock Exchange.—Chartered: The Southern Oil Stock Exchange, with capital stock of \$3000, by M. Marx and others.

Galveston—Oil Company.—Chartered: The Eureka Oil Co., with capital stock of \$150,000, by Robert Bornefeld, James S. Waters, Fred Allen and others.

Galveston—Electric Light and Power Company.—The Brush Electric Light & Power Co. has made arrangements to adopt Texas oil for fuel and will have plant in operation about June 1. Plans and specifications for change in boilers, construction of tanks and all other necessary improvements will be made in a few days.

Galveston—Oil Company.—Chartered: The Texas Star Oil & Land Co., with capital stock of \$100,000, by H. L. Zeigler, C. H. Hughes, S. P. Kelley and others.

Galveston—Oil Company.—The Victoria Oil Co. has been chartered, with capital stock of \$250,000, by A. Newsum, James Moore, Walter Jones, R. S. Rowland and others.

Galveston—Oil Company.—The Great Western High Island Oil Co. has been incorporated, with capital stock of \$2,000,000, by C. N. Rhode, C. S. Richer, F. Oppkofer, E. D. Cavin and others.

Hillsboro—Flour Mill.—E. E. Crumley has arranged for erection of his proposed 75-barrel flour mill.

Hitchcock—Land and Cattle Company.—Chartered: The Jacques Tacquard Land & Cattle Co., with capital stock of \$50,000, by Jacques Tacquard and others.

Houston—Street Improvements and Sewerage.—It has been decided by popular vote to issue \$300,000 of bonds for street improvements and sewerage, previously reported. Address "The Mayor."

Houston—Oil Company.—Chartered: The Coast Ridge Oil Co., with capital stock of \$100,000, by T. C. Dunn, T. H. Stone and others.

Houston—Oil Company.—The New York & Texas Oil Co. has been incorporated, with capital stock of \$1,000,000, by H. A. Lloyd of New York and others.

Houston—Oil Company.—The Texas Railway, Oil & Coal Co. has been incorporated,

with capital stock of \$250,000, for development of oil, coal and other mineral lands; incorporators are H. B. Stoddard of Bryan, Texas; R. M. Cash, F. M. Glibbough of Galveston, F. M. Holland of Dallas and others.

Houston—Irrigation Plant.—The Brazoria-Rio Grande Irrigation Co., lately reported as incorporated, with capital stock of \$300,000, has completed its organization with H. A. Lord of New York, president; Andrew Dow, vice-president; T. W. House of Houston, treasurer, and R. M. Cash, secretary. Company will begin construction of a canal about August 1 for irrigating 50,000 acres of rice lands in Brazoria and Fort Bend counties.

Houston—Oil Company.—The Standard Oil Co. of Texas has been incorporated, with capital stock of \$300,000, by J. H. B. House, T. W. House, Thomas C. Dunn and others.

Houston—Bakery.—The National Bliscuit Co. (principal office, Chicago, Ill.) will erect a plant at Houston to cost \$75,000.

Jefferson—Oil Company.—The Jefferson & Cypress Bayou Oil Co. has been chartered by W. B. Ward, B. F. Sherrell, T. D. Rowell and others.

Knoxville—Overall, etc., Factory.—The Briscoe Manufacturing Co. (lately reported) will install thirty-eight additional sewing machines for enlarging its factory.*

Lake Creek—Telephone System.—Chartered: The Southern Telephone Co., with capital stock of \$1000, by C. M. Read, S. P. Buckler and J. A. Akard.

Lancaster—Cotton-oil Mill.—The Lancaster Cotton Oil Co. has been incorporated, with capital stock of \$50,000, for establishment of the cottonseed-oil mill reported recently; K. L. White, J. D. Miller, B. W. Owens, R. R. Ellis and others are among the incorporators.

Lockhart—Oil Company.—The Lockhart Petroleum Co. has been incorporated, with capital stock of \$100,000, by James G. Burleson, A. R. Chew and R. Wilson.

Luling—Cotton-oil Mill.—A company has been organized, with capital stock of \$60,000, for operation of the 60-ton cottonseed-oil mill previously reported to be established; new company has decided to purchase machinery, buildings and real estate of the Luling Cotton Oil Co., which company will take stock in the new mill. H. B. Holmes will be president; G. C. Walker, vice-president; J. K. Moore, secretary, and D. M. Day, treasurer.

Morgan—Cotton-oil Mill.—The Morgan Cottonseed Oil Mill Co. will erect a mill of twenty-five tons capacity, as recently reported.*

San Antonio—Printing.—Chartered: Texas Homestead, with capital stock of \$10,000, by J. D. Lockhart and others, for printing purposes.

San Antonio—Mercantile.—Chartered: The Pfeuffer-Couring Company, with capital stock of \$25,000, by George H. Pfeuffer and others.

Sherman—Oil Company.—Chartered: The Sherman Oil Co., with capital stock of \$50,000, by F. B. McElroy, T. Forbes, Jr., D. W. Gulick and others.

Texas—Oil Company.—The Tri-State Oil Co. has been chartered at Marshall, Mich., with capital stock of \$1,000,000, to operate in Texas and other States. John R. Hankey of Bowling Green, Ohio, is president; A. F. Chapman of Battle Creek, Mich., secretary, and R. A. Fuller of Beaumont, Texas, treasurer.

Valley Mills—Cottonseed-oil Mill.—A. A. McNeill is president, and H. B. Sears, secretary, of the \$25,000 company reported during the week as organized for establishing a cottonseed-oil mill. It will be a two-press, 40-ton mill.*

Waco—Oil Company.—The Commonwealth Oil Co. has been incorporated, with capital stock of \$100,000, by Sam Sanger, A. J. Baum, H. B. Mistrot and others.

Waco—Land Improvement.—The Texas Land & Improvement Co. has increased its capital stock from \$30,000 to \$40,000.

VIRGINIA.

Newport News—Improvement Company.—The Hampton Roads Investment & Improvement Co. has been incorporated, with capital stock of \$75,000, by Dr. Carter Perkins, president; company will manufacture gas and electricity for light and power and deal in and improve real estate.

Norfolk—Ice-cream Plant.—The Crystal Ice Cream Co. has been incorporated for the manufacture of ice cream, as lately reported; capacity 100,000 gallons per year. Address R. W. Macdonald.*

Portsmouth—Roofing and Cornice Company.—The Bohn Roofing & Cornice Co. has been incorporated, with capital of \$5000, by M. W. Bohn of Norfolk, president; E. K.

Bohn of Robeson, Pa., vice-president, and W. W. Bohn of Norfolk, secretary and treasurer.

Richmond—Mining, etc.—The Ethel Mining Co. has been incorporated, with capital stock of \$50,000, to conduct general mining and smelting business. Henry Froeling is president; E. D. Griffith, vice-president, Mineral, Va.; J. T. Lawrence, secretary and treasurer.

Woodstock—Creamery.—The Woodstock Dairy & Creamery Co. has been incorporated, with authorized capital of \$10,000.

WEST VIRGINIA.

Ceredo—Bridge.—Bids are asked for construction of a bridge over Little Hurricane creek, in Wayne county; H. A. Jackson, C. R. Wilson and J. J. Johnson, commissioners.*

Charleston—Sewer-pipe Company.—The American Sewer Pipe Co. has been incorporated, with capital stock of \$1000, for the manufacture of sewer pipe, tile, fire-brick, etc., by George E. Price, H. B. Smith, R. S. Spilman and others.

East Bank—Coal Mines, etc.—M. D. Brannen has sold his coal property to parties who will organize a \$10,000 stock company for operating same.

Elm Grove—Coal Tipples.—The Elm Grove Mining Co. has contracted for ten additional tipples.

Elkins—Ice Plant.—The Reymann Brewing Co. will erect an ice plant with capacity of twenty tons per day.

Grafton—Planing Mill.—John L. Magill will erect planing mill.

Malden—Coal Mines.—The Campbell Creek Coal Co. will develop 1350 acres of coal lands; other operations are also contemplated. J. E. Dana, superintendent, Charleston, W. Va., may be addressed.

Martinsburg—Water-works Improvement.—The city will hold an election April 29 to decide the issuance of \$33,000 of bonds for improving the water-works system. Address "The Mayor."

Morgantown—Road Improvements.—Monongalia county will soon vote on the issuance of \$150,000 of bonds for macadamizing its roads. Address "County Clerk."

Parkersburg—Mercantile.—Chartered: The Boreman China Co., for conducting a general china business, by R. J. A. Boreman and others; capital stock \$100,000.

Sistersville—Machine Shop.—N. C. Stoner will establish machine shop; machinery reported purchased.

Welch—Coal Mines.—The Davy Crockett Coal & Coke Co., recently organized, will construct a railroad for the development of 40,000 acres of coal lands and erect a number of operatives' dwellings at Davy; new tipple will also be installed.

Wheeling—Mattress Company.—The Paul Mattress Co. has been incorporated for the manufacture of mattresses by W. H. Woodruff, Lewis Huseman, John Friedel and others; capital stock \$25,000.

Williamson—Brick Works.—The Williamson Brick Co. has been chartered, with capital stock of \$10,000, by William O'Brien and others.

BURNED.

Batesburg, S. C.—Batesburg Ginnery and Planing Mill; loss \$4000.

Covington, Ga.—A. C. Norman & Co.'s vehicle factory; loss \$3500.

Cumberland, Md.—Deal Bros.' planing mill in South Cumberland.

Greensboro, N. C.—John R. Wall's saw-mill.

Henderson, Ky.—Gallagher Company, Limited, tobacco factory; estimated loss \$100,000.

Jacksonville, Fla.—Jacksonville Machine & Iron Works damaged about \$5000.

Montgomery, Ala.—Gin and grist mill of J. D. Hendrix; estimated loss \$16,000.

Norfolk, Va.—Norfolk Builders' Manufacturing Co.'s saw-mill; estimated loss \$12,000.

Richmond, Va.—Meyers' department store; estimated loss \$250,000.

Shreveport, La.—Shreveport Ice & Refrigerating Co.'s ice plant; estimated loss \$150,000.

Winchester, Texas.—Mrs. F. E. Willard's cotton gin; loss \$1500.

BUILDING NOTES.

Atlanta, Ga.—Dormitories.—Henry H. Miles has contract at \$28,987 (exclusive of heating apparatus) for erection of the dormitories to the Technological School.

Atlanta, Ga.—Dwelling.—J. M. Smith will erect a frame residence to cost \$4000.

Atlanta, Ga.—Store Building.—Ernest Woodruff will erect a \$4000 store building.

Atlanta, Ga.—Hospital.—A. R. Holderby, G. W. Bull and others have incorporated a company for the erection of the proposed Presbyterian Hospital.

Atlanta, Ga.—Store Building.—J. A. and Oscar Davis will erect a brick store to cost \$11,000.

Baltimore, Md.—Hotel.—The Belvidere Building Co. has been incorporated for erection of the new Hotel Belvidere, lately reported; capital stock is \$500,000, and the incorporators are Nelson Perlin, Douglas H. Thomas, Robert Taylor, William P. Harvey and others.

Baltimore, Md.—Warehouse.—The Merchants' Warehouse Co. has awarded contract to Henry Smith & Son for erection of a \$25,000 building.

Bay Minette, Ala.—Courthouse.—F. M. Dobson of Jasper, Ala., has contract at \$21,000 for erection of Baldwin county's proposed courthouse.

Beaumont, Texas.—Office Building.—M. A. McKnight has contract for erection of the five-story brick office building recently reported to be erected by V. Weiss.

Bluefield, W. Va.—Warehouse.—The Miller Supply Co. of Huntington will build a large machinery warehouse.

Charleston, S. C.—Depot.—Samuel Spencer of New York, R. G. Erwin of Savannah, Ga.; Henry Walters of Baltimore, Md.; Warren G. Elliott of New Hanover county, North Carolina; A. B. Andrews of Raleigh, N. C., and C. S. Gadsden of Charleston have incorporated the Charleston Union Station & Railroad Co. for the erection of the proposed union station at Charleston, lately reported; minimum capital stock is \$50,000, maximum \$200,000.

Chase City, Va.—Town Hall.—It has been decided to issue \$4000 of bonds for erection of the town hall previously reported. Address "The Mayor."

Chattanooga, Tenn.—Office Building.—Capt. H. S. Chamberlain will erect a three-story brick office building to cost \$15,000.

Darlington, S. C.—City Hall and Theater.—A. W. Welling, clerk, will receive sealed bids until May 1 for erection and completion of the city hall and opera-house (lately reported). Certified check for \$500 must accompany each bid; \$10,000 required and usual rights reserved.

Darlington, S. C.—Church and School.—The First Methodist Church will erect a school building and church, bids for their erection to be opened May 1, after plans and specifications by Hayden, Wheeler & Schwend of Charlotte, N. C. Contractor will bond for \$5000. Plans and specifications on file with W. M. Haynesworth, chairman building committee. Address him for information.

El Paso, Texas.—School Building.—Sealed bids will be opened April 25 by the board of public school trustees for erection of a high-school building in accordance with plans and specifications which can be seen at office of Edward Kneezell, architect, Rooms 6 and 7, Center Block. Certified check for \$500 must accompany each bid; bond required and usual rights reserved.

Gainesville, Ga.—Residence.—Dr. E. E. Dickson has let contract to John A. Pierce for erection of a residence.

Galveston, Texas.—Opera-house.—The Galveston Opera Co. will have plans made at once for rebuilding theater; cost will be \$40,000. Contracts will be awarded as soon as plans are ready.

Goldboro, N. C.—Building.—J. F. Miller, superintendent board of directors, will receive bids until April 30 for erection of a three-story brick building 145x37 feet. Plans and specifications on file, and bond required.

Greenville, S. C.—Tabernacle.—The Ministers' Association is considering the erection of a tabernacle.

Hapeville, Ga.—Buildings.—H. M. Wood, clerk commissioners roads and revenues, Fulton county, Atlanta, Ga., will receive sealed proposals until May 20 for all the labor and materials necessary and required for erection of building at the industrial farm for boys at Hapeville, in accordance with plans, drawings and specifications prepared by George Wilson Stewart, architect. Each bid must be accompanied by certified check for 2½ per cent. of the amount of proposal. Proposals must be made on blank forms furnished by architect.

Knoxville, Tenn.—Residence.—Mrs. M. J. Condon will erect a \$10,000 residence after plans by Leon Beaver.

Mobile, Ala.—Building.—W. H. Sledge, chairman committee, will receive plans from architects until April 24 for erection of a

one-story brick building, enclosed basement-room, for school purposes; cost, including heating apparatus, sanitary system, etc., not to exceed \$5000.

Newport News, Va.—Clubhouse.—The Hampton Roads Yacht Club will contract for erection of clubhouse with all modern improvements, including electric lights, water, plumbing, etc.; plans prepared by Dwyer & Neff.

New Roads, La.—Building.—W. J. Holden, 320 Carondelet street, will receive sealed bids until April 25 for erection of a frame clubhouse and dancing pavilion for the New Roads Progressive League. Certified check for \$75 must accompany each bid. Bond required and usual rights reserved.

New Roads, La.—Courthouse.—Bids are invited for construction of a new brick courthouse and for remodeling of the present courthouse. Further information can be had on application. Bidders are invited to submit plans to O. St. Dizier, chairman of police jury, on or before May 15.

Port Gibson, Miss.—Bank Building.—McGee Bros. of Jackson, Miss., have contract for erection of the new building for the Mississippi National Bank.

Raleigh, N. C.—Dwelling.—Charles J. Parker has had plans prepared by Charles Pearson for erection of a large dwelling.

Richmond, Va.—Store.—Messrs. Meers will rebuild their store, reported burned at a loss of \$250,000.

Richmond, Va.—Roundhouse, etc.—The Chesapeake & Ohio Railroad Co., George W. Stevens, president, is having plans made by Francis W. Scarborough for erection of roundhouse and for establishing new yards in Fulton county at a cost of \$300,000.

Richmond, Va.—Dwellings.—Gilbert J. Hunt will prepare plans for erection of five dwellings to cost \$15,000 each. William J. Payne is interested.

Roland Park, Md.—Church.—The Roland Park Presbyterian congregation will erect a \$25,000 church; plans have not been prepared. Address Rev. J. W. Douglas, pastor.

Roland Park, Md.—Dwellings.—William M. Ellicott has awarded contract to Luther Wright for erection of residence.

Rutherfordton, N. C.—Jail.—The county court will consider bids on erection of a modern jail. Address M. O. Dickerson, clerk.

Starkville, Miss.—Courthouse.—Lindamood & Puckett have received contract at \$26,000 for erection of Starkville's new courthouse.

Walhalla, S. C.—Jail.—Wm. J. Sterling, J. W. Holleman and A. P. Crist, building committee, will receive bids until May 6 for erection of a jail and sheriff's residence. Plans and specifications may be seen at office of E. H. McCollough.

Washington, D. C.—Hospital Building.—The Episcopal Eye, Ear and Throat Hospital has purchased site for \$9000, and will erect a new building.

Washington, D. C.—Buildings.—N. T. Haller has prepared plans for erection of six three-story brick and stone dwellings. Plans have been prepared for an addition to Providence Hospital, and the Brennan Construction Co. has contract. C. Heurich is having plans made by Paul J. Pelz for erection of an apartment-house.

Washington, D. C.—Apartment-house.—The Plaza Apartment-House Co. has been incorporated, with T. F. Schneider, president; E. S. Smith, vice-president, and R. E. Bradley, secretary and treasurer; capital stock \$250,000.

Wheeling, W. Va.—Apartment-house.—The George E. House Improvement Co. has been incorporated, with capital stock of \$50,000, for erection of the apartment-house recently reported proposed by George E. House.

RAILROAD CONSTRUCTION.

Railways.

Anniston, Ala.—The Anniston Industrial Association is taking steps to include this city upon the route of the Brunswick & Birmingham Railroad. Hon. James W. Lapsley is president of the association.

Athens, Texas.—About fourteen miles of track have been constructed upon the extension of the section of the Southern Pacific Railroad between Athens and the Neches river. Messrs. Tansey Bros. & Co. have secured the contract for this portion, which is thirty-three miles in length.

Augusta, Ga.—Mr. James U. Jackson, one of the promoters of the electric railroad between Augusta and Aiken, writes the Manufacturers' Record that preliminary arrangements for the work are now being perfected and he is getting quotations on the necessary material.

Augusta, Ga.—It is announced that the Georgia Railroad Co. has determined to construct a number of sidings at several points upon its line between Atlanta and Augusta. Thomas K. Scott at Augusta is general manager of the company.

Biloxi, Miss.—James B. Cable, president of the Gulf Coast Electric Railway Co., states that a contract has been signed with a Northern construction company to build it between Biloxi and Pass Christian, an estimated distance of twenty-five miles. W. W. Hungerford of New York is understood to be interested in the construction company. W. L. Covel of Biloxi is also one of the promoters of the enterprise.

Birmingham, Ala.—It is stated that work on the extension of the Birmingham, Selma & New Orleans Railroad between Martin's Station and Linden, Ala., is to be resumed in the near future. F. M. Abbott at Selma, Ala., is president of the company.

Boonville, Mo.—The latest report concerning the extension of the Missouri Pacific system between Boonville and Jefferson City is to the effect that it is to be completed by September 15. Russell Harding of St. Louis is vice-president of the company.

Brownwood, Texas.—It is reported that the first section of the extension of the Fort Worth & Rio Grande Railroad between Brownwood and Brady has been let to contract, and that material has been secured. It will be fifty miles in length. H. C. Wicker at Fort Worth is president of the company.

Center, Texas.—It is reported that the Southern Pacific Railway Co. has under consideration an extension to Center and that surveys are now being made. W. G. Van Vleck at Houston, Texas, is general manager.

Douglas, Ga.—Arrangements are being made to construct a railroad line from Douglas to the Ocmulgee river, a distance of fifteen miles. Business men are interested in the enterprise.

El Paso, Texas.—Among those interested in the El Paso Terminal Railroad Co., recently organized, are Walter Douglas of Bisbee, Ariz., and M. W. Wambaugh of El Paso. It is stated that the company will construct terminals for the Arizona & Southwestern Railroad, and will connect with other lines entering the city.

Fitzgerald, Ga.—It is reported that the Waycross Air Line Railroad Co. has decided to extend its Fitzgerald branch to Cordele as soon as possible. J. E. Wadley at Waycross is president of the company.

Fort Smith, Ark.—E. N. Holbrook of Hutchinson, Kan., is reported as interested in the Hutchinson & Southeastern Railroad Co., recently formed to build between Fort Smith and Hutchinson, a distance of 400 miles.

Gainesville, Ga.—The Gainesville & Dahlonega Electric Railway Co. has applied for a charter to build between the towns mentioned. It is stated that power may be secured from the Chattahoochee river. The plan includes street railway lines in Gainesville and Dahlonega. Among those reported as interested are H. H. Dean of Gainesville and J. F. Moore of Dahlonega. Surveys are now being made.

Harrisonburg, Va.—W. H. Rickard has been elected president, and H. B. Miller, secretary, of the Central Railway Co. of Virginia, chartered at the last session of the legislature.

Houma, La.—R. W. Nelson and Joseph A. Humphreys are interested in a proposed railroad between Houma and Morgan City which may terminate at a connection with the Texas & Pacific system. It is being promoted by a company called the New Orleans, Houma & Western Railroad. The estimated length of the railroad is thirty miles.

Jackson, Miss.—J. J. Baxter of Jackson has secured the contract, it is reported, for a number of side-tracks for the Illinois Central system, which will aggregate twenty miles in length, to be built between Crystal Springs and New Orleans.

Jacksonville, Fla.—It is announced that Charles F. Hebard & Co. of Philadelphia have purchased the timber land in what is known as the Okefenokee swamp, in Southern Georgia, and are making arrangements to build a railroad line between this property and Jacksonville. R. R. Hopkins of Brunswick, Ga., is one of the Southern representatives.

Kansas City, Mo.—The Kansas City Southern Railway Co. has decided to construct a number of masonry foundations for bridges and for culverts, and has given a contract to John P. Hughes which comprises 40,000 yards of this work. The estimated cost is \$250,000.

Kentwood, La.—E. V. Preston, superintendent of the Kentwood & Eastern Rail-

road Co., informs the Manufacturers' Record that twenty-eight miles of this road are in operation, and that a contract has been let for seven miles of extension to be completed by August 15. The necessary rails have been secured for the extension. The Banner Lumber Co. of Kentwood is interested in the road.

La Porte, Texas.—The business men of La Porte are endeavoring to secure an extension of the Southern Pacific to the center of the town. It would be two miles long if built. W. G. Van Vleck at Houston is general manager.

Lebanon, Tenn.—It is announced that Calhoun & Co. of Knoxville, Tenn., have secured a contract to build what is known as the Nashville-Lebanon extension of the Tennessee Central Railroad, which will be thirty-four miles long. Jere Baxter at Nashville is president of the railroad company.

Lincolnton, N. C.—The Trans-Appalachian Railroad has been surveyed from Lincolnton to Butler, Tenn., by W. E. Walton, chief engineer of the company.

Louisville, Ky.—A company entitled the Louisville & West Point Electric Railway Co. has been organized to build between Louisville and West Point, and it is reported that work is to begin about May 1 and that right of way has been secured. The distance is twenty miles.

Louisville, Ky.—Relative to the Louisville & Port Royal Railroad, recently referred to in the Manufacturers' Record, it is stated that Olof Bergstrom of Gothenburg, Neb., is one of the promoters of the project. It is proposed to build from Louisville to Walhalla, S. C., to connect with a line reaching Port Royal on the seacoast. Mr. Bergstrom was formerly connected with the Union Pacific system.

Louisville, Ky.—It is stated that the Chesapeake & Ohio Railway Co. is making arrangements to build several miles of additional track in the city for terminals at an expense of \$250,000. F. W. Scarborough of Richmond, Va., is engineer.

Malden, W. Va.—J. E. Dana, president of the Campbell's Creek Railroad Co., informs the Manufacturers' Record that the line under construction is to be completed during the present year. It will be twelve miles in length.

Mannington, W. Va.—A plan is under way to build an electric line between Mannington and Smithfield, W. Va., connecting the Baltimore & Ohio and the West Virginia Short-line railroads. F. W. Bartlett at Mannington is reported as interested in the scheme.

Maysville, Ky.—It is reported that E. D. Smith of Blanchester, Ohio, and F. M. Condon of Morrow, Ohio, are interested in an electric railroad to be built from Aberdeen, Ohio, to Maysville, with branches. The estimated distance is ninety miles.

Meridian, Miss.—The latest report concerning the Meridian & Eastern Railroad is that arrangements have been made to construct it between Meridian and Butler, Ala., and that work is to begin in the near future. Its distance is thirty-five miles. Among those interested are W. G. Boorman of New Orleans and W. E. Glover of Butler.

Mobile, Ala.—Robert P. Kent of Philadelphia is making surveys for the extension of the Mobile, Jackson & Kansas City Railroad from Merrill to Hattiesburg, for which a contract has been let to C. D. Smith & Co. of Birmingham, Ala.

Monterey, Tenn.—It is reported that work has commenced upon a railroad line extending from Monterey, on the Tennessee Central, to the Laurel coal mines in Overton county.

Morganton, N. C.—It is reported that a company has been formed by Pennsylvania parties to build a narrow-gauge railroad between Morganton and Linville mountain to reach timber tracts in that section of the State.

Nashville, Tenn.—President Jere Baxter of the Tennessee Central states that contracts have been let to construct the terminals for this road within the Nashville city limits at a cost of \$250,000. President Baxter may be addressed at Nashville.

New Iberia, La.—J. M. Hazlehurst of New Orleans has been appointed engineer for the Teche Electric Railway Co., which intends building between New Iberia and a point on the Gulf coast. F. F. Myles at New Orleans is president of the company. Final surveys have begun.

Norfolk, Va.—The Bay Shore Terminal Co. has secured authority to lay its tracks through Norfolk county between Ocean View and the suburbs of Norfolk.

Oxford, N. C.—The plan to build a railroad between Oxford and a connection with the Seaboard Air Line has been revived. If

built, the road will be about four miles in length. Local parties are interested.

Paris, Ky.—The fiscal court has given a franchise to a company which proposes building from Paris to Centerville and other towns in the vicinity. Another company, which includes John T. Hinton and others of Paris, has also secured a franchise to build an electric railroad along what is known as the Maysville and Lexington turnpike.

Parkersburg, W. Va.—A franchise has been granted to J. M. Jackson, J. N. Camden and others to build the proposed electric railroad between Parkersburg and Marietta, Ohio, an estimated distance of twelve miles.

Piedmont, W. Va.—The Baltimore & Ohio Railroad Co. has begun the work of grading an additional track between Piedmont and Keyser. J. M. Graham at Baltimore is chief engineer of the company.

Port Arthur, Texas.—It is stated that a company may be organized in Port Arthur to build a railroad between this city and Orange, a distance of thirty miles.

Richmond, Va.—J. F. Petch, general manager of the Cleveland Construction Co., which has the general contract for building the electric line between Richmond and Petersburg, informs the Manufacturers' Record that all contracts have been placed. No decision has been reached as yet relative to extending the line within the city limits. W. Christy is president of the company.

Savannah, Ga.—W. J. Oliver & Co., who have secured the contract for building the approaches to the Union Depot at Savannah, inform the Manufacturers' Record that the mileage will comprise a single track two miles in length and a double track three miles in length. The road will be laid with 70-pound steel rails.

Sedgwick, Ark.—A correspondent of the Manufacturers' Record writes that surveys are in progress for a railroad between Sedgwick and a point north of this town. Arrangements have been made for the grading, but rails and rolling stock have not been purchased. H. A. Culver, general manager of the Kansas City & Southern Lumber Co., is interested.

Shreveport, La.—In addition to the extension of thirty miles of the Texas & Pacific system between Shreveport and Natchitoches, recently let to contract, it is stated about forty-five miles will be constructed next year. The contract referred to has been let to the Grigsby Construction Co. It is calculated to complete the extension between New Roads, La., and the Red river during the present year. B. S. Wathen at Dallas, Texas, is chief engineer.

Sistersville, W. Va.—The Tyler Railroad Co. has made arrangements for a survey for the line between Sistersville and Middlebourne, a distance of ten miles. H. W. McCoy of Sistersville is president of the railroad company.

Smithdale, Ark.—William S. Gifford of the Gifford-Friesbee Lumber Co. writes the Manufacturers' Record that the company is now constructing an extension from a connection with the Choctaw, Oklahoma & Gulf Railroad to the St. Francis river, a distance of twelve and one-half miles. It is expected to complete the road in a few weeks.

Swainsboro, Ga.—It is reported that grading has been completed upon the extension of the Stillmore Air Line between Swainsboro and Wadley, and that tracklaying has commenced. The extension is twenty miles in length. G. M. Brinson at Stillmore is president of the company.

Tiptonville, Tenn.—The Manufacturers' Record is informed that the idea of building an electric railroad between Tiptonville and Obion has been abandoned, but that railroad promoters are negotiating with the Illinois Central Company, which may construct a branch between the towns. J. C. Harris at Tiptonville is one of the parties interested.

Vicksburg, Miss.—An official of the Birmingham & Vicksburg Railroad Co. is authority for the statement that about fifty-five miles of road have been surveyed and right of way secured for this mileage. The total length of the road will be about 250 miles. D. Levy at Canton, Miss., is secretary.

Washington, D. C.—Lamprecht Bros. Company of Cleveland, Ohio, in a letter to the Manufacturers' Record, confirms the report that it is interested in the proposed electric line between Baltimore, Washington and Annapolis, and states that surveys are now in progress. It is intended to complete the construction as soon as possible. The Baltimore representative of the promoters is George R. Willis.

Washington, D. C.—It is reported that Messrs. Kearns & Egan have secured a contract for building the Washington & Seaboard Railroad, being promoted between

Washington and Point Lookout, at the mouth of the Potomac river, an estimated distance of eighty miles. It is also proposed to construct about nine miles of branches. A. B. Linderman is president, and William A. Hoffman, secretary and treasurer, of the company. The address of the company is Lippincott Building, Philadelphia.

Street Railways.

Brunswick, Ga.—Mike Brown of Barnwell, S. C., is reported as interested in a proposed street railroad to be built in Brunswick.

Columbus, Miss.—The Columbus Light & Power Co. is considering the construction of a street railway line in the city. H. J. Malochie of New Orleans, it is stated, is interested in the project.

New Orleans, La.—The New Orleans City Railroad Co. has secured a franchise to build what is termed a belt line in the suburbs. The estimated cost of the road is \$12,000.

Petersburg, Va.—John E. Harvell, superintendent of the Southside Railway & Development Co., writes the Manufacturers' Record that about three and one-half miles of line recently secured will be rebuilt for the use of electric motors and extended a distance of one and one-half miles. Rails will be required in the near future.

Shelbyville, Ky.—Thomas Byars, who, it is understood, represents the Louisville & Pewee Valley Railway Co., has secured a franchise to build an electric railway within the town limits. Percival Moore of Louisville, Ky., is interested in the railway company referred to.

Sherman, Texas.—It is reported that Hon. J. D. Woods and others have decided to construct an electric railroad about ten miles in length in the city and suburbs. It will be built to the village of Fairview.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Agricultural Implements.—F. Bockelmann, Barrenquilla, Colombia, wants catalogues from manufacturers of agricultural implements.

Automobile Manufacturers.—A. M. Wilson, Miakka, Fla., wants addresses of manufacturers of automobiles.

Axe Manufacturers.—Walter Graham, Old Fort, N. C., wants to contract for the manufacture of a patented axe.

Boat.—J. P. Cummings, Nelta, La., wants to buy a small boat, either steam or gasoline, or the machinery for a boat.

Boiler.—A. M. Burns, Roxboro, N. C., wants to buy a second-hand 20 or 25-horse-power horizontal return tubular boiler. Wants everything complete.

Boiler and Engine.—Pee Dee Manufacturing Co., Rockingham, N. C., wants quotations on one 20-horse-power return-tubular boiler and one 15-horse-power center-crank engine; to include all necessary fixtures, 30-foot smokestack and guy-ropes; prices quoted f. o. b. Rockingham.

Boiler and Engines.—Alvin Etheredge, Saluda, S. C., wants prices on slide-valve and automatic engines, seventy-five horse-power; also on 90-horse-power boiler.

Boilers.—Wm. M. Meredith, director Bureau Engraving and Printing, Washington, D. C., will open proposals April 29 to furnish and place in position complete two water-tube boilers of 250 horse-power each, rated capacity, fitted with smoke-consuming furnaces. Plans and specifications, with blank forms of proposals and all necessary information, will be furnished on application.

Brick Machinery.—J. M. Archer, Jr., Sparta, Ga., is in the market for a brick machine.

Brick Machinery.—W. N. Matthews & Bros., St. Louis, Mo., want to purchase press-brick machinery for plant of from 4,000,000 to 12,000,000 per year capacity.

Brick Machinery.—Oakland Pressed Brick Co., A. C. Davis, secretary, Parkersburg, W. Va., will be in the market for brick machinery in the future.

Brick Machinery.—Ferris Press Brick Co., Ferris, Texas, wants to buy machinery for a plant of 40,000 per day capacity. Address T. G. Cole.

Bridge.—H. A. Jackson, C. R. Wilson and J. J. Johnson, commissioners, Ceredo, W. Va., will open proposals May 3 for construction of a bridge of stone and white oak timber, in accordance with plan on file; also proposals for building said bridge of steel, iron and stone, in accordance with plans on file. Usual rights reserved.

Bridge.—Sealed proposals will be received by "County Judge," Newport, Ky., until April 20 for construction of an iron span over Ten-Mile creek; length of span, fifty feet; width of roadway, twelve feet; bridge to have iron substructure tubes probably thirty or forty feet high. Persons desiring to bid will submit plans. Wooden joists will be used. Usual rights reserved. Address E. E. Ball, engineer, California, Ky., for information regarding location, etc.

Bridges.—T. W. Harbin, ordinary, Calhoun, Ga., will receive bids for construction of two iron and steel bridges on steel cylinder piers in Gordon county, one to be of one span 140 feet, and the other of one span 120 feet. Plans and specifications on file.

Bridges.—Franklin county will award contract May 8 for construction of two steel bridges, one 145 feet long and the other ninety feet long, each twelve feet wide. Address W. M. Quail and J. T. Green, commissioners, Ozark, Ark.

Bridges.—T. W. Harbin, clerk to commissioners of Gordon county roads and revenues, Calhoun, Ga., will open proposals June 5 for construction of an iron and steel bridge across Coosawattee river, said bridge to be on steel cylinder piers. Also at same time and place proposals will be received to build two iron and steel bridges on steel cylinder piers across Oostanaula river. Bids will also be received for building approaches to above bridges and for furnishing all material needed in their construction per lineal foot. Plans and specifications are on file in ordinary's office. Usual rights reserved.

Builders' Supplies.—J. F. Miller, superintendent board of directors, Goldsboro, N. C., will open bids April 20 for delivering lumber, lime, cement, doors, windows, sashes, slate, stone window sills and iron bars for windows necessary for completion of a three-story brick building 145x37 feet. Usual rights reserved.

Building Contractors.—G. E. Webb, Winston-Salem, N. C., wants to correspond with contractors relative to erection of an auditorium with two small stores and offices, seating capacity 24,000.

Cable Racks.—John Stephen Sewell, captain, engineers, United States engineer office, 735 North Capitol street, Washington, D. C., will receive sealed proposals until May 9 for furnishing cast-iron and steel cable racks, porcelain insulator clamps, insulators and accessories for electrical installation for new building for government printing office. Information furnished on application.

Cement.—W. H. Bixby, major engineers, Cincinnati, Ohio, will open bids May 16 for furnishing about 57,000 barrels of cement, Portland or natural, at Dam 13, Ohio river, near Wheeling, W. Va. Information from Major Bixby or Wm. Martin, engineer, Davis Island Dam, Bellevue, Pa.

Cotton-cleaning Mill.—F. Bockelmann, Barrenquilla, Colombia, wants catalogues from manufacturers of cotton-cleaning machinery.

Cotton Mill.—James A. Benson, Washington, Ga., wants information regarding the establishment of a cotton mill (does not care to manufacture unbleached shirting and sheeting).

Dam.—Lexington Hydraulic & Manufacturing Co., Lexington, Ky., will open proposals May 1 for furnishing material and construction of an earthen dam in accordance with plans and specifications to be seen and procured at company's office. Certified check for \$1000 must accompany each bid. Bond required and usual rights reserved.

Dredging.—Mordcait T. Endicott, bureau of yards and docks, Washington, D. C., will open proposals May 11 for dredging at the naval station, Port Royal, S. C. Appropriation to be expended, \$87,000. For plans, specifications and forms of proposal address commandant naval station, Port Royal, S. C.

Electrical Machinery.—J. R. Cook & Son, Americus, Ga., are in the market for a two or three-phase alternating generator, about sixty kilowatts; also a direct-connected pump to be used in connection; pump to deliver about 200 gallons water per minute under seventy-five pounds pressure.

Electric Plant.—Harby Brokerage Co., Sumter, S. C., is in the market for a 10 to

20-light second-hand dynamo, direct-connected, complete, with all fittings.

Electric-light Plant.—Opening of bids for lighting the town of Suffolk, Va., has been postponed until May 14. Requirements will be thirty arc lights and fifty incandescents. For further particulars address W. N. McAnge, chairman light committee.

Electric-light Plant.—R. S. Stearnes & Co., New Orleans, La., will need 600-light, 220-volt dynamo, 45-horse-power engine, switchboard, wires, cross-arms, pins and insulators.

Electric-wiring System.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open proposals May 20 for installation of electric conduit and wiring system for United States post-office, Annapolis, Md., in accordance with drawings and specifications, copies of which may be obtained at his office.

Engine.—See "Railway Equipment."

Engine.—The W. H. Daniel Supply Co., Mullins, S. C., wants to buy an engine.

Engine Equipment.—See "Saw-mill."

Excelsior Machinery.—Keystone Agency Co., P. O. Box 957, New Orleans, La., wants to correspond with manufacturers of excelsior machinery.

Fertilizer Machinery.—Beall Bros., Laverne, Ala., want to correspond with manufacturers of machines for mixing guano.

Furnace and Crane.—Proposals will be received at the bureau of supplies and accounts, Navy Department, Washington, D. C., until April 23 to furnish at the Pensacola (Fla.) navy-yard one plate furnace, one angle furnace, one pillar crane. Blank proposals will be furnished on application to navy-yard, Pensacola, Fla.; A. S. Kenny, paymaster-general, United States Navy.

Furniture.—The Court of Dallas County Revenues, Ala., will consider bids for furniture for new courthouse, steel or wood. Usual rights reserved. Address P. G. Wood, judge, Selma, Ala.

Furniture Machinery.—Georgetown Furniture Co., Georgetown, S. C., will probably buy machinery for manufacture of furniture.

Hydrants.—See "Pipe."

Ice-cream Machinery.—Crystal Ice Cream Co., Norfolk, Va., will need machinery, tubs, etc., for establishment of an ice-cream plant.

Japanning.—Eclipse Manufacturing & Plating Co., Birmingham, Ala., wants addresses of parties who deal in supplies for the japanning of castings.

Manufacturers.—Otto Max & Co., 4, Place Sadl Carnot, Marseilles, France, want to correspond with manufacturers of cottonseed oil and all the products of cottonseed; also grains, seeds, wheat, oats, etc., fertilizers, and all kinds of wood goods, such as pitch-pine, oak and other hardwoods, staves, etc.

Oil Mill.—H. B. Sears, secretary, Valley Mills, Texas, will receive bids on a two-press, 40-ton cottonseed-oil mill.

Oil Mill.—Morgan Cottonseed Oil Mill Co., Morgan, Texas, will purchase cottonseed-oil mill of twenty-five tons capacity.

Oil-mill Machinery.—Campobello Oil Mill, Campobello, S. C., is in the market for a meal mill and cake-breaker; manufacturers can submit lowest prices on 20 to 26-inch attrition mills and correspondingly cake-breakers.

Paper Manufacturers.—Thos. P. Moore, Morganton, N. C., wants to correspond with paper manufacturers using wood pulp.

Paving.—Proposals will be received until April 20 for paving one square of King street with vitrified brick and granite curbing. For further information address J. G. Holcombe, city engineer, Alexandria, Va.

Pipe.—The city of High Point, N. C., is open for bids on the following pipe: 22.20 feet 12-inch, 32.27 feet 10-inch, 12.820 feet eight-inch, 6.455 feet six-inch, 9.660 feet four-inch, with valves and connections complete, and also hydrants.

Piping.—See "Sewerage."

Pump.—See "Electrical Machinery."

Railway Equipment.—J. C. Jackson & Sons, Wilsonville, Ala., are in the market for twenty-five or thirty gross tons 30-pound relaying steel rails, with necessary spikes; want net cash price f. o. b. Wilsonville.

Railway Equipment.—H. A. Culver, general manager Kansas City & Southern Lumber Co., Sedgwick, Ark., will purchase rails and rolling stock for railroad.

Railway Equipment.—Yellow Creek Coal & Lumber Co., Middlesborough, Ky., is in the market for forty or fifty tons of relaying rails, 20, 30 or 40-pound wire-rope drum and equipment, 12 or 14-inch coal-car wheels, and irons for coal cars.

Railway Equipment.—W. M. Corry, Quincy, Fla., wants cash prices and particulars on twenty to twenty-five tons 16-pound second-hand relaying rails, with fasteners.

Railway Equipment.—Phillips & McEachin, Albion, Fla., want to purchase a locomotive engine weighing eighteen to twenty tons; new or second-hand.

Railway Equipment.—East Carolina Railway, Henry Clark Bridges, president, Taboro, N. C., wants a second-hand passenger coach, standard-gauge.

Saddle Manufacturers.—A. E. Kenney, Grantsville, W. Va., wants to correspond with manufacturers of saddles.

Saw-mill.—L. C. Gracy, High Springs, Fla., will want 9x12-inch twin engine carriage feed, 35-foot carriage complete, live rollers (ten sets), four-saw gang edger, log haul-up, etc.

Sewerage.—J. H. Baker, Jr., mayor, Rocky Mount, N. C., will open proposals April 25 for constructing pipe sewers and for furnishing sewer pipe; extent of proposed work is approximately six miles of pipe sewers from eight to fifteen inches diameter. For specifications, forms of proposals, etc., address J. L. Ludlow, engineer, Winston, N. C.

Sewerage.—J. B. Fisher, H. E. Woolfolk, C. W. Welsh and W. C. Dunlap, sewer committee, Danville, Ky., will receive sealed proposals until May 2 for furnishing all material and constructing a system of sanitary sewers consisting of 5700 feet of 10-inch, 25,300 feet of eight-inch tile sewers, with thirteen manholes, sixteen flush tanks and three septic tanks. Plans and specifications can be seen at Danville and at 127 Hartford Building, Chicago. Each proposal must be submitted on blank forms furnished by the committee and accompanied by certified check for \$500. Usual rights reserved.

Sewing Machines.—Briscoe Manufacturing Co., Knoxville, Tenn., is in the market for machines for making overalls, shirtwaists, etc.

Steam Launch.—W. H. Bixby, major engineers, custom-house, Cincinnati, Ohio, will open bids May 14 for a 30-foot flat-bottomed, steel-hulled, stern-wheeled steam launch. Information on application.

Tanks.—John R. Young, B. F. Bullard and J. A. G. Carson, a committee representing the National Tank & Export Co., Savannah, Ga., will receive bids until May 1 for erection of from one to five steel tanks of 5000 barrels (fifty gallons per barrel) capacity each, for storage of spirits turpentine. Plans and specifications to accompany bids. Tanks to be erected delivered on foundations provided by company, but requirements as to foundations to accompany proposals.

Textile Machinery.—Henry F. Jennings, Cope, S. C., wants to correspond with manufacturers of machinery for making handkerchiefs.

Trucks.—See "Woodworking Machinery."

Turnstile.—Peacock Iron Works, Selma, Ala., wants prices on turnstiles that will register each person as they pass through the same.

Water Meters.—J. W. Cannon, Concord, N. C., is in the market for a lot of water meters.

Water Plant.—A. F. Wyman, Braidentown, Fla., wants cost of constructing a small water plant, with stand-pipe or elevated tank.

Well-drillers.—Galveston-Beaumont Oil Co., 510 Tremont street, Galveston, Texas, will receive proposals until April 25 for drilling an oil well. Bond required and usual rights reserved.

Well Drilling.—G. C. Nesmith, Collins, Miss., will purchase machinery (steam or horse power) for drilling artesian wells 1500 to 2000 feet.

Well Drilling.—George Sibley, Lonoke, Ark., wants information on well drilling and quotations on machinery.

Wood-pulp Machinery.—Thos. P. Moore, Morganton, N. C., wants addresses of makers of machinery for manufacturing wood pulp.

Woodworking Machinery.—F. L. Lane, Box 115, Madison, Ga., wants addresses of manufacturers of handle machinery.

Woodworking Machinery.—Ricks Bros., Reynolds, Ga., are in need of planing-mill machinery and machinery for staves, new or second-hand.

Woodworking Machinery.—Babcock Bros. Lumber Co., Boykin, Ga., will be in the market for all kinds of woodworking machinery and supplies.

Woodworking Machinery.—Geo. W. Willebrands, 50 Jefferson avenue, Detroit, Mich., wants a carry rip-saw, eight or nine-inch Levi Houston sticker, large factory trucks and single-bit boring machine.

Woodworking Machinery.—Conecuh Pine Lumber & Manufacturing Co., Montgomery, Ala., will need rabbeting machine, double-

end tenoner, two-sided sticker, gang ripper, sash sticker, double-end power-feed sash tenon machine, sash clamp, power-feed door clamp, diagonal planer, variety saw table, corner-block machine, carver or tracer, column-boring machine, reversible friction-feed shaper, pair sash combs, dowel machine complete, stile, rail and dowel driver for dowel doors, and one glue vat.

TRADE NOTES.

Factories Wanted.—Factories are wanted to locate in one of the best railroad towns in Arkansas. Cash bonuses are offered to desirable industries. Address Box 71, Little Rock.

Hardware and Tin Business.—An established and profitable hardware and tin business in a flourishing Pennsylvania town is offered for sale by Dr. D. R. Strain, Brimfield, Pa.

Bethlehem Steel in St. Louis.—The St. Louis offices of the Bethlehem Steel Co. of South Bethlehem, Pa., have been removed from 930 North Main street to 510 Security Building, and will continue in charge of S. E. Freeman.

Steel-Tank Construction.—The National Tank & Export Co., John R. Young, chairman, advertised last week as asking for bids on the construction of steel tanks, is of Savannah, Ga. This address was inadvertently omitted last week. (See adv.)

For Axe Manufacturers.—Proposals are wanted by Walter Graham, Old Fort, N. C., for the manufacture of a patented axe, both finished and forged only. New axe works or manufacturers that will consider adding such a product to their output are requested to correspond.

Steam Shovels and Locomotives.—All the locomotives and steam shovels used in the construction of the recently-completed Grant Boulevard at Pittsburg have been purchased from H. J. Werneberg by John H. Carlin of the Carlin Machinery & Supply Co., Lacock and Sandusky streets, Allegheny, Pa.

Iron-Fence Contract.—Iron fencing, wire fencing, ornamental grills and wrought-iron work, elevator and office enclosures, wire cloth and netting constitute the output of the Dow Wire Works Co., Louisville, Ky. A recent contract of this company was 950 lineal feet of heavy wrought-iron fence six feet high for the L. & N. Terminal Co. at Nashville.

Schieren Belting Exhibit.—One of the most creditable industrial exhibits at the Pan-American Exposition will be that of Messrs. Chas. A. Schieren & Co. of New York. They will also loan belts to run the machinery generating the electricity. This firm tans and manufactures oak leather belting and lace leather, and its product is favorably known almost everywhere.

Fiftieth Anniversary.—The fiftieth anniversary of the American Steam Gauge & Valve Manufacturing Co., Jamaica Plain, Boston, Mass., was celebrated on the evening of the 15th. Invitations were issued, dancing being one of the attractions offered. This company is well and widely known for its combined pressure and recording gauges, whistles, clocks and all steam instruments.

Ready to Wear Roofing.—The new plant of the Eastern Granite Roofing Co. at Jersey City, N. J., is claimed to be the largest and most complete in America for the production of stone-surfaced roofing, and the company confidently states that perfected granite roofing, the standard "Ready to Wear" roof covering of America, will continue to hold first place in durability, sightliness and fire-proof qualities.

Improved Vehicle Tire.—The Lattina Cellular Tire is springy, non-puncturable, and adapted to any kind of vehicle from automobile to bicycle. It is made by the Rubber Tire Co., 1215 Market street, Philadelphia. The company is busily engaged in filling orders for the tire, and finds its contracts far in excess of last season. The tire is giving the best of results to users, and is highly appreciated on its merits.

American Iron & Steel Manufacturing Co. This company advises its Maryland and West Virginia customers that the Baltimore (Md.) office has been discontinued, and requests that all inquiries and orders from the territory referred to be sent direct to Lebanon, Pa. Chas. R. Wilcox is no longer in the company's employ, the general sales agent states. The company manufactures merchant bar iron, bolts, nuts, rivets, etc., its works being at Lebanon and Reading, Pa.

Sale of Agricultural Works.—In pursuance of court decrees, the extensive and valuable plant of the Southern Agricultural Works at Atlanta will be offered for sale at public outcry on May 15. The plant will be offered both as a whole and in parcels as selected. The equipment of machinery and tools is complete of its kind and adapted to the production of agricultural machinery. Further details may be obtained by addressing Chas. S. Northen, commissioner, 820 Austell Building, Atlanta, Ga.

Attention! B. F. Sturtevant Company Resumes.—The fire that damaged the extensive plant of the B. F. Sturtevant Company at Jamaica Plain, Boston, Mass., on Monday last was confined to the office, engine and electrical departments. The company telegraphs the Manufacturers' Record that the power plant and the blower and heater departments were uninjured, and that operations resumed on the 16th inst. This indicates that there will be no delay in fulfilling contracts for the celebrated Sturtevant system of heating and ventilating.

Perfect Type of Engine.—The largest engine that will be in operation at the Pan-American Exposition is from the Murray Iron Works Co. of Burlington, Iowa. It is a tandem-compound-condensing Corliss engine with steam cylinders 15x42 and 30x42 inches. It will have a wheel sixteen feet in diameter grooved for a Dodge rope-drive. This will not be an idle exhibit, for the engine will do daily duty in the service of the Exposition. The engine will embody the well-known features of the heavy-duty Corliss engines built by the company and be regulated by its celebrated high-speed governor.

Of Interest to Mine Operators.—The Hooper Pneumatic Milling Co., 517 West Thirtieth street, New York city, announces its change of name to the General Concentrates Co., American Exchange National Bank Building, New York city. This company has interested some large mine operators in its devices, and is gathering a series of machines which will appeal strongly to the experienced miner desirous of saving his values. The company builds machinery for treating gold, silver, lead, zinc, tin, copper and all other mineral-bearing ores. It also announces for sale all kinds of mining machinery suitable for milling ores without the use of water.

Riley's New Works.—Many Southern plants assist in supplying their section with the machinery of all kinds necessary for the extensive industrial development now in progress. Among the more important of these is the foundry and machine works of John F. Riley at Charleston, S. C. Mr. Riley's plant was destroyed by fire a month ago, and he now announces the completion of entirely new works. Upon the old site has been erected a substantial building of ample size, well equipped with improved machinery and appliances for the production of every kind of work possible in such shops. All kinds of machinery is built and repaired at the Riley works.

American Steam Gauge Co.—This company announces change of name to the American Steam Gauge & Valve Manufacturing Co., this action being taken in order that the title may more accurately convey an idea of the range of the company's product. This latter includes the Thompson Improved Indicator, which is used by leading engine builders everywhere, the United States and foreign navies, universities and technical institutes and others. The company also manufactures the American Patent Pop Safety Valves, which have been so extensively adopted, and in addition standard appliances for measuring, recording, indicating and controlling steam, air, gas, ammonia and other pressures.

Static Ground Detector.—The Stanley Electric Manufacturing Co. of Pittsfield, Mass., announces the issue of a new bulletin, No. 116, illustrating and describing a new type of S. K. C. Static Ground Detector, designed for circuits carrying very high voltages. This is said to be the first instrument of the kind combining thorough reliability with absolute immunity for switchboard attendants from danger of shock. The phases of the instruments are charged statically through the medium of condensers; thus live wires are kept out of and entirely away from the instrument. Those familiar with ground detectors and their uses and advantages will be prompt to appreciate this one's superiority. Bulletin mailed upon request.

An Exceptional Opportunity.—Such may be briefly said as to a water-power property in

Southern Virginia now offered for sale. The property includes a water-power from which 5715 horse-power may be obtained, 213 acres of land available for factory sites, and charter for a \$3,000,000 company to manufacture cotton, woolen or other product. These and other advantages will appeal to the discerning manufacturer looking for a site where economy in production may be best served. Stephen Greene of Lockwood, Greene & Co., Boston, and other engineers have made favorable reports on the property. Copies of plans, drawings, reports and other information may be obtained by addressing W. Cabell Bruce, Equitable Building, Baltimore, Md.

Byrne Water Heater.—One of the modern conveniences for hotels, boarding-houses private families and wherever hot water is desired is the Byrne Water Heater. This device will commend itself to those desiring to obtain hot water without having a fire in warm weather or waiting for water to heat. It will boil a gallon of water in five minutes or less, and it is readily seen, therefore, that a bathtub full of water will be sufficiently heated while one is preparing for the bath. This heater is submerged in the water, and heats in every direction. Its utility will attract the attention of physicians, hospital managers, storekeepers and others who have special use for hot water and may find it not convenient to keep boilers already charged with hot water. Messrs. Stevenson & Co., 229 Holliday street, Baltimore, Md., manufacture the Byrne Submerged Heater.

Design of Heating and Ventilating Systems.—The proper design of a satisfactory system of heating and ventilation is neither a question of theory nor of practice, the one independent of the other, but such a comprehensive knowledge of the entire matters is necessary that certainty of result may be assured. As the demands for improved ventilation have increased the problem has grown more and more complicated until it has become an evident fact that no public building of reasonable size should be trusted to other than an expert of established reputation. As a consequence, the architect looks either to an expert engineer or to a reputable and experienced house to develop the plans for heating and ventilation. The B. F. Sturtevant Co., Boston, Mass., has been directly connected with this class of work for over a third of a century, has fostered and established the general system of heating and ventilation by a forced circulation of warm air, and is prepared and qualified to undertake the largest contracts wherein the fan is an essential feature. The Sturtevant system has been upheld because it is theoretical, logical and practical.

Important Cable Making and Laying.—The first important step in the making and laying of the cables for the new East river bridge at New York was taken last week. This was placing in position the two-and-one-quarter-inch-diameter ropes which will support the temporary foot-bridge on which the workmen will stand during the main work of cable-laying. Methods of getting the first line across as practiced in the past by the aid of kites, swimmers and otherwise were discarded. The method used was a distinct advance over previous ones. This was to carry the drum containing the cable across the river on a float and pay out the cable, allowing it to rest on the river bed until it could be raised from the water and to the desired height by means of stationary engine and drum. The first cable was raised April 11 in seven minutes, navigation being suspended during that period. This important work was accomplished by the John A. Roebling Sons Co. of Trenton, N. J., which has the contract for making and laying all the cables for this bridge. Charles G. Roebling, president, is engineer in charge of the cable-laying, and, assisted by Wm. Hildenbrandt, is supervising the fulfillment of the contract.

Friends With a Long Memory.

"One thing the Pan-American movement has done," says a Buffalo paper, "it has persuaded Buffalonians that they have not been forgotten by outside relatives and friends." In the same way letters received by T. W. Lee, general passenger agent of the Lackawanna Railroad, asking for information about the exposition, seem to show that the traveling public has not forgotten the Lackawanna as the shortest and most picturesque route to the grounds.

Five through trains daily between Buffalo and New York, equipped with Pullman drawing-room, sleeping and observation cars, magnificent dining cars and vestibuled coaches. ↑

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Increase in Business.

The remarkable increase in business of banks of Atlanta, Ga., is shown by recent statements of the Third National and Fourth National in that city. Since April 5, 1899, the surplus of the Third National has increased from \$52,000 to \$85,000, and its resources from \$967,000 to \$2,000,000. The profits of the Fourth National have increased from \$85,000 to \$111,000, and its resources from \$1,763,000 to \$2,531,000.

New Corporations.

O. B. Collins of Snow Hill, Md., is announced as interested in the formation of a new bank at Ashland, Va.

A national bank has been organized at Glen Rose, Texas, with \$25,000 capital stock, by J. R. Allen and others.

The Merchants' Bank has been organized at Mobile, Ala., and capitalized at \$150,000 by L. C. Fry and others.

The Colored Savings and Loan Association has been organized at Laurens, S. C., by P. M. Miller and others.

The Greenville Banking & Trust Co. of Greenville, N. C., has begun business, with L. I. Moore, president, and R. J. Cobb, cashier.

The Neal Loan & Banking Co. of Atlanta, Ga., has determined to open a savings department in addition to its other business.

It is expected that the Steel City Bank, recently formed at Ensley, Ala., will begin business about April 20. R. R. Stobert is president.

The necessary capital stock has been secured for the Bank of Chatham, being organized at Pittsboro, N. C., which will soon open for business.

The organizers of the Thurmont National Bank of Thurmont, Md., have been authorized to begin business. The bank is capitalized at \$25,000.

The People's Bank is the title of the new organization at Bedford City, Va. L. R. Gills has been elected president, and W. A. Falconer, vice-president.

A dispatch from Johnson City, Tenn., is to the effect that S. L. Howard of Ghent, Ky., is interested in the organization of a new bank in Johnson City.

The Nashville Trust Co. of Nashville, Tenn., is considering the formation of a branch to carry on discount and safe-deposit business. J. H. Thompson is president.

A commission has been issued to the Globe Loan Association of Charleston, S. C., to begin business, with \$150,000 capital stock. A. T. Smythe is one of the incorporators.

E. K. Austin of Birmingham, Ala., and others have formed the City Loan & Banking Co. of Birmingham, capitalized at \$50,000. Arrangements will be made to begin business at once.

John P. Jones, Jr., of Catonsville, Md., and F. X. Ganter of Baltimore are interested in the Mercantile Savings and Investment Association, recently organized at Baltimore, capitalized at \$666,400.

T. N. Jones has been elected president; J. P. McKay, vice-president, and G. W. Roy, cashier of the Bank of Madison, recently organized at the town of this name in Mississippi, with \$20,000 capital stock.

The First National Bank of Roby, Texas, capitalized at \$40,000, and the First National Bank of Moody in the

same State, capitalized at \$25,000, have been authorized to begin business by the comptroller of the currency.

J. W. Comer has been elected president and treasurer, and R. H. Cobb, vice-president and general manager of the Comer-Cobb Investment Co., organized at Anniston, Ala., with \$50,000 capital stock. The company will do a real estate and fire insurance business.

A dispatch from Wheeling, W. Va., is to the effect that arrangements are being made to organize two additional banks in this city, one of which will be located in the Southern section and capitalized at \$25,000. T. M. Haskins is interested in it. The other bank will be capitalized at \$25,000 and is being organized by H. Ball and Joseph Speidel.

New Securities.

Stockholders of the Bank of Gulfport, Miss., have decided to increase its capital from \$10,000 to \$25,000.

The city council of Annapolis, Md., has decided to sell \$72,000 in bonds on May 28. The mayor may be addressed.

New Orleans investors have purchased the issue of \$100,000 in levee bonds of the Caddo (La.) district, paying 112½.

Bids will be received until May 1 for the issue of \$25,000 in bonds of Phoenix City, Ala., by W. D. Wilkins, mayor.

N. B. Murff, comptroller, will receive bids until May 2 for an issue of \$100,000 in improvement bonds of Shreveport, La.

The town council of Farmville, Va., has decided to issue \$15,000 in refunding bonds. The town clerk may be addressed.

Bids will be received until April 25 for the issue of \$18,000 in 6 per cent. bonds of East Lake, Ala. N. A. Barrett is mayor.

Messrs. F. R. Fulton & Co. of Chicago have purchased the issue of bonds of Lauderdale county, Alabama, at a premium of \$2100.

The Fidelity & Deposit Co. of Baltimore has under consideration a proposed increase in its capital stock from \$1,500,000 to \$2,000,000.

The city of Sherman, Texas, has voted in favor of issuing \$80,000 in 4½ per cent. bonds for improvements. The mayor will give further particulars.

Messrs. W. J. Hayes & Sons of Cleveland, Ohio, have purchased the issue of \$75,000 in 5 per cent. bonds of El Paso, Texas, paying \$109,556.

The city of Weatherford, Texas, has voted in favor of issuing \$45,000 in 4 per cent. bonds for improvements. The mayor may be addressed.

The city of Aiken, S. C., will probably issue \$30,000 in 4 per cent. bonds for improvements and to fund a floating indebtedness. A. Emanuel is mayor.

Messrs. Rudolph Kleybolte & Co. of Cincinnati have purchased the issue of bonds of Rocky Mount, N. C., paying 102. The bonds bear 5 per cent. interest.

T. L. Green, town clerk, may be addressed relative to the issue of \$15,000 in 5 per cent. bonds of Waynesville, N. C., for which proposals will be received until May 1.

The proposed issue of bonds of Etowah county, Alabama, amounts to \$10,000, and will bear 4 per cent. interest. The county commissioners will receive bids until April 22 at Gadsden, Ala.

A dispatch from Atlanta, Ga., states that the issue of \$200,000 in bonds for water-works recently decided upon will probably be placed upon the market immediately. The mayor may be addressed.

Harris county, Texas, will probably place on the market in the near future an issue of \$600,000 in bonds for road improvements authorized by the State legislature. The commissioners' court may be addressed at Houston, Texas.

Financial Notes.

The Finance Banking Co. of Atlanta has decided to change its title to the City Savings Bank. J. F. Leary is president.

The Union Trust Co. of Baltimore has secured a controlling interest in the Citizens' Trust Co. and the latter will be merged with it.

The People's Bank of Baltimore has secured permission from the comptroller of the currency to begin business as a national bank, with \$200,000 capital. It is to be called the Maryland National Bank. Joseph H. Judik is president.

A recent list of securities offered for sale by Messrs. Spencer Trask & Co. of New York include such well-known Southern bonds as Mobile & Ohio, Illinois Central and St. Louis, Iron Mountain & Southern. The firm also has 4 per cent. consolidated bonds of the Mexican Central system.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending April 16.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	98	98
Aiken Mfg. Co. (S. C.)	92	96
American Spinning Co. (S. C.)	102	102
Anderson Cotton Mills (S. C.)	127	127
Arcade Cotton Mills (S. C.)	100	100
Arkwright Mills (S. C.)	120	120
Augusta Factory (Ga.)	80	85
Avondale Mills (Ala.)	85	104
Belton Mills (S. C.)	100	104
Bennettsville Mfg. Co. (S. C.)	100	101½
Cabarrus Cotton Mills (N. C.)	145	152
Cannon Mfg. Co. (N. C.)	175	195
Clifton Mfg. Co. (S. C.)	175	182
Clinton Cotton Mills (S. C.)	120	118
Courtenay Mfg. Co. (S. C.)	116	119
Dallas Mfg. Co. (Ala.)	101	101
Darlington Mfg. Co. (S. C.)	95	100
Engle & Phenix Mills (Ga.)	100	100
Enoree Mfg. Co. (S. C.)	114	118
Enterprise Mfg. Co. (Ga.)	100	103
F. W. Poe Mfg. Co. (S. C.)	115	119
Gaffney Mfg. Co. (S. C.)	116½	116½
Granby Mills (S. C.)	101½	101½
Granby Mills (S. C.) 1st Pfd.	102	106
Grainville Mfg. Co. (S. C.)	162	167
Greenwood Cotton Mills (S. C.)	98	100½
Grendel Mills (S. C.)	100	102½
Henderson Cotton Mills (N. C.)	120	125
Hierietta Mills (N. C.)	198	210
John P. King Mfg. Co. (Ga.)	100	103
Lanier Mfg. Co. (S. C.)	112	118
Laurens Cotton Mills (S. C.)	140	145
Lockhart Mills (S. C.)	104½	104½
Louisville Mills (S. C.)	100	104
Lynchburg Cotton Mills (Va.)	125	150
Lynchburg Cotton Mills (Va.) Pfd.	145	150
Manchester Cotton Mills (S. C.)	100	104
Mayo Mills (N. C.)	130	130
McColl Mfg. Co. (S. C.)	120	120
Newberry Cotton Mills (S. C.)	115	122
Odell Mfg. Co. (N. C.)	108	113
Orr Cotton Mills (S. C.)	100	102½
Paelet Mfg. Co. (S. C.)	105	105
Pelzer Mfg. Co. (S. C.)	183	183
Piedmont Mfg. Co. (S. C.)	181½	181½
Raleigh Cotton Mills (N. C.)	115	115
Richland Cotton Mills (S. C.)	104	110
Richland Cotton Mills (S. C.) Pfd.	101	105
Roanoke Mills (N. C.)	100	103
Sibley Mfg. Co. (Ga.)	82	86
Southern Cotton Mills (N. C.)	97½	104
Spartan Mills (S. C.)	125	135
Trion Mfg. Co. (Ga.)	120	120
Tucupau Mills Co. (S. C.)	100	100
Union Cotton Mills (S. C.)	135	135
Union Cotton Mills (S. C.) Pfd.	100	102
Victor Mfg. Co. (S. C.)	106½	106½
Warren Mfg. Co. (S. C.)	88	92
Warren Mfg. Co. (S. C.) Pfd.	105	105
Whitney Mfg. Co. (S. C.)	117	127
Wilmington Cot. Mills (N. C.) Pfd.	100	105
Wiscasset Mills (N. C.)	117½	117½

The Board of Trade of Opelousas, La., has been organized, with Isaac Roos, president; Dr. W. M. Thompson, Jules Malancon, Maurice Vilaseca, vice-presidents; Dr. A. J. Berrier, secretary, and Joseph Lassale, treasurer.

Curious Conditions Changed by Quiet.

When jaded by the cares and worries of this life, when filled with a spirit of unrest, the best thing imaginable for the afflicted to do is to hie himself to new scenes—to the primal wilds, in that part of New England known as the fishing regions, there to enjoy a period of absolute quiet.

The enjoyment, the complete retirement in which one finds himself, is the best health restorer you can find. The manipulation of hooks, nets and lines, the sight of a big, wary fish, anxious for a tussle, and the excitement attending the landing of one of these fine fellows, will drive away the blues, and every moment of the spring vacation is one of intense enjoyment.

The regions, or sections, which offer allurements to the early fisherman are several, but the most prominent and con-

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spicuous are the Moosehead and Rangeley regions, though many sportsmen prefer the Allegash region or the territory in Washington county, Maine, while others single out Lake Winnepesaukee or Memphremagog, or Sunapee or Champlain, or, perhaps, some one of the streams or lake of the Adirondacks is the choice for the spring sport.

The Boston & Maine Railroad reaches every section in which spring fishing is a predominant feature, and the pamphlet, "Fishing and Hunting," gotten out by its general passenger department, whose offices are in Boston, Mass., is chock-full of interesting information which every sportsman should read, and a two-cent stamp sent to the above address will procure it for you.

Tempting Terms.

Those who are planning an early trip to the Pan-American Exposition will be interested to learn that the \$12 excursion tickets from New York to Buffalo over the Lackawanna Railroad will be on sale every day during May. The limit is ten days.

Another excursion trip is for \$13, and tickets will be good for fifteen days, beginning June 1. A particularly tempting rate is a \$9 excursion ticket to be sold on Tuesdays during May, good for five days, and honored only in coaches.

A beautiful guide to the Exposition, telling about its many wonderful features, is being sent out in response to requests accompanied by four cents in stamps to T. W. Lee, general passenger agent, New York city. Write for one.